Volume 68
Number 1

March, 1954
Pages 1-95

$4.00 a Year
$1.25 a Number

# Journal of the New England Water Works Association

ISSUED QUARTERLY

*Published by*
NEW ENGLAND WATER WORKS ASSOCIATION
73 Tremont Street, Boston 8, Massachusetts

Entered as second-class matter September 23, 1903, at the Post Office at Boston, Mass., under Act of Congress of March 3, 1879
Copyright, 1954, by the New England Water Works Association

# OFFICERS
## OF THE
# New England Water Works Association
## 1953 - 1954

PRESIDENT

William B. Duffy, Superintendent, Public Works, North Andover, Mass.
(Term expires September 1954)

VICE PRESIDENTS

Robert G. Gaetman, Superintendent, Water Division, Needham, Mass.
(Term expires September 1954)

Allan F. McAlary, Superintendent and Treasurer, Camden & Rockland Water Company, Rockland, Maine.
(Term expires September 1955)

DIRECTORS

Edward L. Tracy, Director, Division of Sanitary Engineering, State Department of Health, Burlington, Vermont.
(Term expires September 1954)

George G. Bogren, Partner, Weston and Sampson, Boston, Mass.
(Term expires September 1955)

Fred P. Stebbins, Manager, Bristol County Water Company, Bristol, Rhode Island.
(Term expires September 1956)

PAST PRESIDENTS

Frederick O. A. Almquist, Principal Sanitary Engineer, Connecticut State Department of Health, Hartford, Connecticut.

Stanley M. Dore, Deputy Chief, New York Board of Water Supply, New York, N. Y.

SECRETARY

Joseph C. Knox, Secretary, New England Interstate Water Pollution Control Commission, Boston, Mass.

TREASURER

William P. Mellen, Commissioner, Water Department, Milton, Mass.

EDITOR

Chester C. Hosmer, 220 Clyde Street, Brookline 67, Mass.

---

THE Association was organized in Boston, Mass., on June 21, 1882, with the object of providing its members with means of social intercourse and for the exchange of knowledge pertaining to the construction and management of water works. From an original membership of only TWENTY-SEVEN, its growth has prospered until now it includes the names of 900 men. Its membership is divided into six classes, viz.:

*A Member* shall be an officer or employee of a public or private water works, an engineer, chemist or other person qualified to aid or interested in the advancement of knowledge relative to water works.

*An Honorary Member* shall be a person of acknowledged eminence in some branch of water supply or of engineering.

*A Junior* shall be not less than eighteen years nor more than twenty-five years of age, a student or connected with water supply work.

*An Associate* shall be either a person, firm or corporation engaged in manufacturing or furnishing materials or supplies for the construction or maintenance of water works.

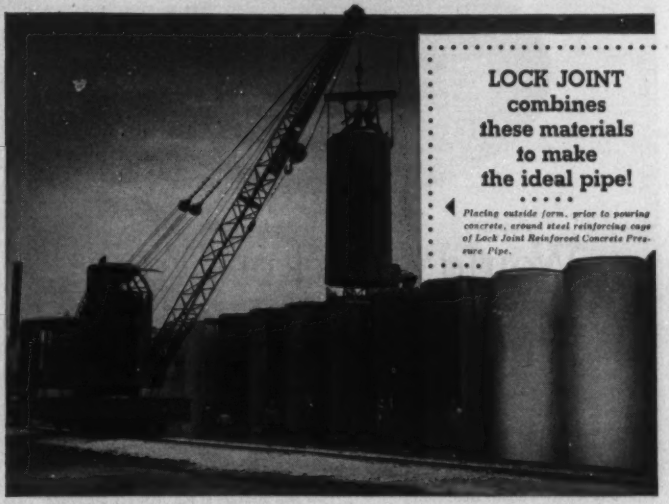
*A Corporate Member* shall be either a Water Board, Commission, Company or Municipal Corporation.

The initiation fees and annual dues are as follows:

| | Initiation Fees | | Annual Dues |
|---|---|---|---|
| Members | $ 5.00 | Members | $ 5.00 |
| Juniors | 1.00 | Juniors | 1.00 |
| Associates | 25.00 | Associates | 25.00 |
| Corporate Members | 10.00 | Corporate Members | 10.00 |

This Association has at least eight regular meetings each year, of which five are held in Boston, one in northern New England, one in southern New England, and one, the annual convention, held in September or October on such date as the Executive Committee may designate.

# There's no substitute for CONCRETE and STEEL!



**LOCK JOINT combines these materials to make the ideal pipe!**

*Placing outside form, prior to pouring concrete, around steel reinforcing cage of Lock Joint Reinforced Concrete Pressure Pipe.*

**CONCRETE**, with its proven qualities of durability, non-corrosion, resistance to electrolytic action, and high compression strength is combined, by Lock Joint, with steel's toughness, resilience and high tensile strength to make a pipe that retains the best qualities of both—non tuberculance, high structural strength and long life with little or no maintenance. Dense concrete affords complete protection for the quality reinforcing steel. Both materials are carefully calculated to meet your pressure needs with a wide factor of safety. The Lock Joint Pipe Company's Rubber and Steel Joint is extremely watertight and, at the same time, flexible.

For superior strength, carrying characteristics and trouble-free operation, let Lock Joint supply your pipe needs in sizes 16" and larger.

## LOCK JOINT PIPE COMPANY

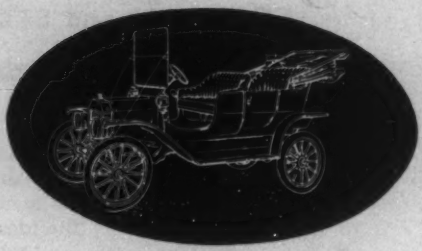
*Established 1905*

**P. O. Box 269, East Orange, N. J.**

PRESSURE PIPE PLANTS: Wharton, N. J., Turner, Kan., Detroit, Mich., Columbia, S. C.

SEWER & CULVERT PIPE PLANTS: Casper, Wyo. • Cheyenne, Wyo. • Denver, Col. • Kansas City, Mo. • Kennett Square, Pa. • Valley Park, Mo. • Chicago, Ill. Rock Island, Ill. • Wichita, Kan. • Kenilworth, N. J. Hartford, Conn. • Tucumcari, N. Mex. • Oklahoma City, Okla. Tulsa, Okla. • Beloit, Wis. • Henrietta, N. Y. • Hato Rey, P. R. Ponce, P. R. • Caracas, Venezuela

SCOPE OF SERVICES—*Lock Joint Pipe Company specializes in the manufacture and installation of Reinforced Concrete Pressure Pipe for Water Supply and Distribution Mains 16" in diameter or larger, as well as Concrete Pipes of all types for Sanitary Sewers, Storm Drains, Culverts and Subaqueous Lines.*



# Would you keep on repairing a 1912 car?

There are many thousands of meters purchased thirty or more years ago still in service. They are being periodically repaired—frequently rebuilt from the old meter case up. This practice can impose a tremendous burden of trouble and expense on a water utility, especially at today's higher labor rates.

Many management men, with an eye towards costs, know these facts. They know that a new Rockwell meter will measure 95% of the ¼ gpm or smaller flows as against 90% or less for a repaired meter. They realize that if the cost of repairing an old meter amounts to half the cost of a new meter, they are better off to buy a new one.

Here at Rockwell we've worked constantly for improvement and our meters show it. They will measure at top accuracy for longer periods at lower costs. You can buy them with full confidence in their ability to cut your operating and maintenance costs and increase your revenue.

**Rockwell Modern Meters For Modern Measurement Needs**

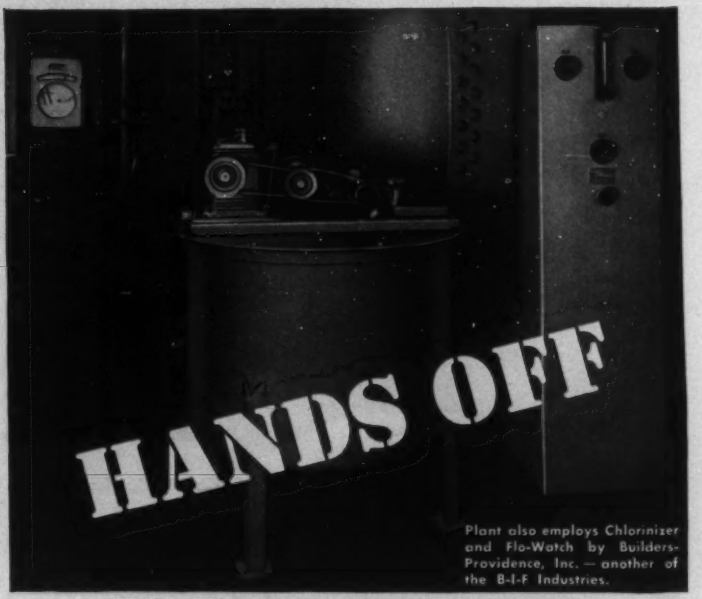
| ARCTIC | TROPIC | EMPIRE TYPE 12 | EMPIRE TYPE 14 |
|---|---|---|---|
| Disc Type | Disc Type | Piston Type | Piston Type |

*The Symbol for Service, Quality and Performance in Water Meters*

**ROCKWELL MANUFACTURING COMPANY**

PITTSBURGH 8, PA. Atlanta Boston Chicago Houston
Los Angeles N. Kansas City New York Philadelphia
Pittsburgh San Francisco Seattle Tulsa

*In Canada: Peacock Brothers Limited*




Plant also employs Chlorinizer and Flo-Watch by Builders-Providence, Inc. — another of the B-I-F Industries.

# PROPORTIONEERS
## Corrosion Control at Work

This new Proportioneers lime slurry feeding package featuring a classifying draft tube solves the complete corrosion control problem for the Jamestown Water Company in Jamestown, Rhode Island — and does the job PRACTICALLY WITHOUT ANY OPERATOR ATTENTION WHATSOEVER. It's a simple unit — a Proportioneers Heavy Duty Chem-O-Feeder mounted on an agitator-equipped tank. The milk of lime is injected into the effluent from pressure filters against a pressure of 85 p.s.i. The complete package is self-cleaning, and practically self-operating, and includes safety features which insure against failure or clogging.

Solve your chemical feeding problems with a Proportioneers equipment package. Send details for data and recommendations. Proportioneers, Inc. 366 Harris Ave., Providence 1, R. I.

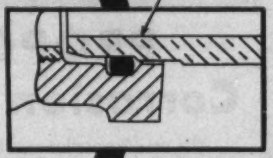
PROPORTIONEERS

DIVISION OF B-I-F INDUSTRIES, INC.
BUILDERS IRON FOUNDRY • BUILDERS-PROVIDENCE, INC. • OMEGA MACHINE CO.

METERS
FEEDERS
CONTROLS

WITH

# NEW RING-TITE JOINT.....

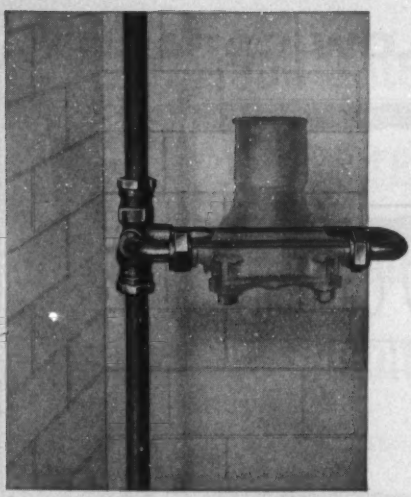



Smith A.W.W.A. Specifications Gate Valves (4" through 12") and Smith Fire Hydrants (with 4" and 6" connecting joints) are now available with Ring-Tite joints for direct connection to Johns-Manville Class 150 Transite Ring-Tite Pipe. No special fittings or extra joint material needed. Installation is quick, easy, economical, and joints can be made in any weather and in roughest terrain. Tight, flexible joints are assured. At low pressures, radial compression of rubber rings seals the joint; increasing pressure wedges the rings—the higher the pressure the tighter the seal. For complete details write for Bulletin RT 53.

44

THE A.P. SMITH MFG. CO.

EAST ORANGE, NEW JERSEY



# For Setting Meters in Basements

EASY TO INSTALL

## The KORNERHORN

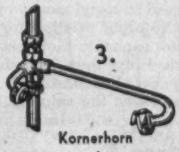
In a vertical basement pipe, against the wall or in a corner, the Kornerhorn makes a most satisfactory meter setting. Installation is fast and economical as pipe threading is eliminated. Send for detailed information.

**When Valves are Needed**

Ford Kornerhorn valves installed on the supply side, or on both sides of the Kornerhorn add extra convenience and cleanliness when meters are changed.

**1.** Cut supply line. Clamp not necessary but convenient

**2.** Add Connections



**3.** Kornerhorn in place

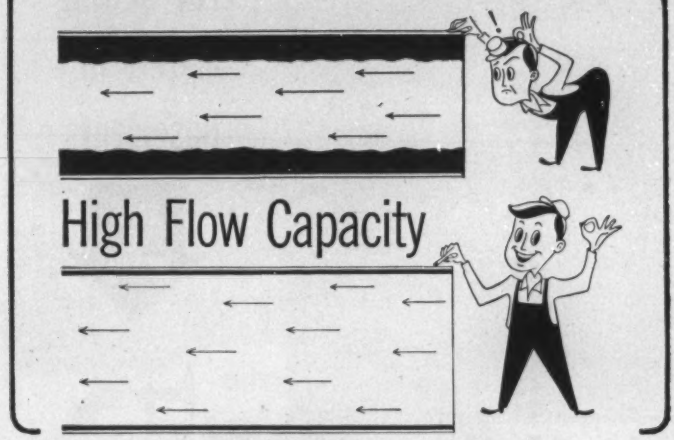
**THE FORD METER BOX COMPANY, INC.**

FOR BETTER WATER SERVICES

**Wabash, Indiana**

FORD

# LOW FLOW CAPACITY




## . . . Bitumastic 70-B Enamel makes the difference by preventing corrosion

● Flow capacity *stays* high when Bitumastic® 70-B Enamel protects interior surfaces of steel pipe lines. This durable enamel prevents rust, corrosion, incrustation and tuberculation... keeps pipe lines from "shrinking." With this kind of protection, there's no need to spend money on *over-sized* pipe in order to allow for future loss in flow capacity. Flow tests conducted on steel pipe lines, centrifugally lined with hot Bitumastic 70-B Enamel, have shown the value of Hazen-Williams coefficient "C"=145 to 160.

BITUMASTIC PROTECTION 100th Anniversary 1854 1954

You can save money in another way with Bitumastic 70-B Enamel. When applied to a thickness of 3/32", it protects the exterior of pipe against the corrosive action of the soil. It is wasteful to specify an excess of wall thickness to compensate for corrosion. It is more economical to specify just enough wall thickness to give the pipe adequate structural strength and to use Bitumastic 70-B Enamel to prevent corrosion.

Use strong, durable steel pipe, lined and coated with Bitumastic 70-B Enamel, and give your community worthwhile savings. Write for full information on protecting large-diameter water lines.

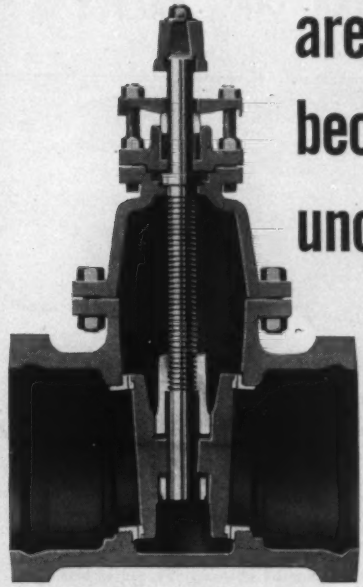
KOPPERS BITUMASTIC ENAMELS®

**KOPPERS COMPANY, INC.**

**Tar Products Division, Dept. 306-T, Pittsburgh 19, Pennsylvania**

**DISTRICT OFFICES: BOSTON, CHICAGO, LOS ANGELES, NEW YORK, PITTSBURGH, AND WOODWARD, ALA.**

# R. D. Wood Gate Valves



Available with mechanical joint connections.

## are reliable because they are uncomplicated

There's a sort of reverse English to designing R. D. Wood Gate Valves. The point is to make them as simple as possible, to eliminate all the ingeniously complicated parts that look good in the blueprint but cause operating failures deep down in the lines. You'll appreciate their rugged simplicity when you put them to the test. R. D. Wood Gate Valves are built to function for generations of trouble-free flow control.

## FEATURES OF THE R. D. WOOD GATE VALVE

Internal mechanism comprises only three parts—the spreader and two discs. Usual small wedges and delicate parts are avoided. Fully opened valve provides unobstructed passage for full pipe capacity.

Rising or descending, discs are free to revolve completely. In closing, discs are fully lowered before spreading action begins. Wear on bronze faces of discs and seats is evenly distributed.

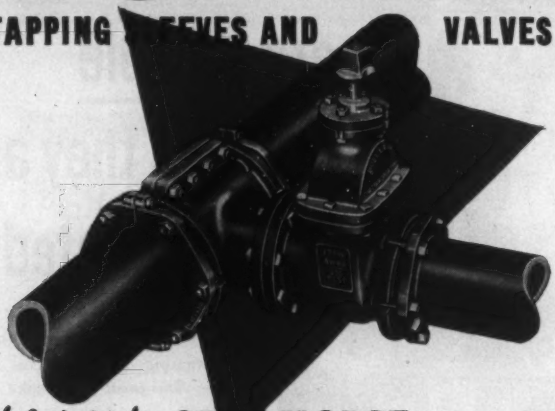
## R. D. WOOD COMPANY

**Public Ledger Building**
**Independence Square, Phila. 5, Pa.**

Manufacturers of Mathews Hydrants and "Sand-Spun" Pipe (centrifugally cast in sand molds)

# MUELLER

## TAPPING SLEEVES AND VALVES



*are your* **STRONGEST**

*branch main connections!*

Any movement of a branch main creates high stresses at the branch main connection. Mueller tapping connections are specifically designed with heavy ribs to actually strengthen the main. Connections may be made quickly, under pressure, without loss of water or interruption of flow.

The heavy, corrosion-resistant bolts have self-holding heads and are closely and evenly spaced in perfect alignment along the side flanges of the sleeve for maximum rigidity. The wide, thick side flanges are grooved for positive retention of the lead gaskets to assure a lifetime watertight joint.

A simple flanged connection between the tapping sleeve and tapping valve assures positive alignment for accurate drilling and ease of installation.

Mueller Mechanical Joint Sleeves can be adapted to fit all classes of cast iron pipe by changing the end gaskets. The raised cast ring in the calked joint sleeves centers the ring and keeps the use of expensive lead to a minimum.

Mueller Tapping Valves have oversize seat openings to allow the use of full-size shell cutters.

Tapping valves can be furnished with either "O" ring packing or conventional packing and mechanical joint or hub end outlet.

Consult your Mueller Water Works Catalog W-96 or see your Mueller representative for full details.

**MUELLER CO.**

*Dependable Since 1857*

MAIN OFFICE & FACTORY DECATUR, ILLINOIS

*Wide World Photo*

# this could happen in your town

**THIS CITY STREET CAVED IN** when a water main broke. It's a dramatic, but not an unusual example of what water does to road bedding. Protect your roads and pipes from the problems of leakage by Centrilining. This patented process thoroughly cleans and centrifugally lines pipes with cement mortar. Leakage, tuberculation and interior corrosion are permanently checked . . . carrying capacity and distribution pressure are increased to "better than new" highs. And the whole process is done with pipes in place . . . no excavation . . . no traffic disruption. With Centrilining you can save your water mains . . . and streets too.

*Write today for free booklet*

**CEMENT-MORTAR LININGS FOR PIPES IN PLACE**

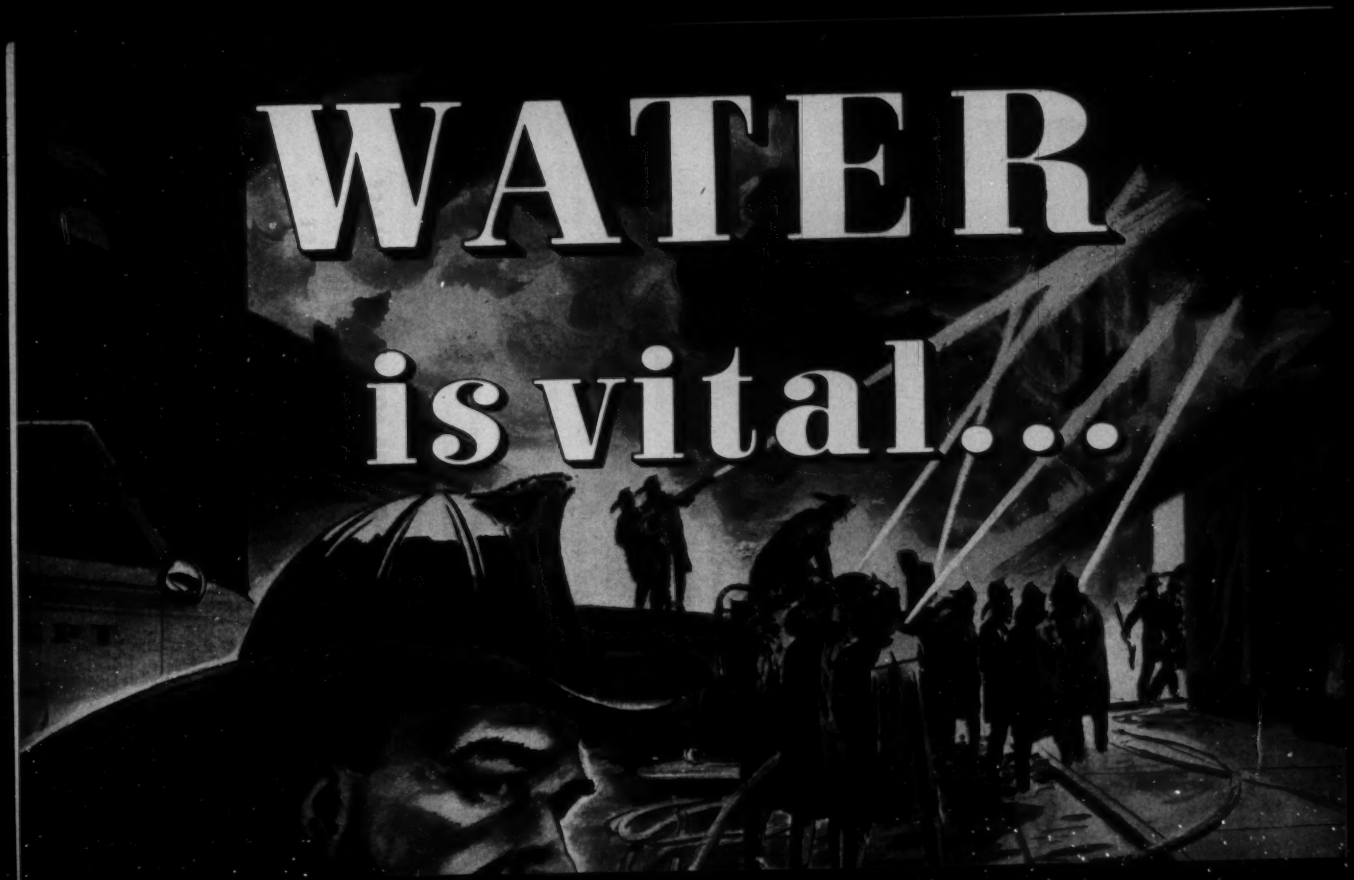
**3,000,000 FEET** **OF EXPERIENCE**

## CENTRILINE CORPORATION

*A subsidiary of Raymond Concrete Pile Co.*

**140 CEDAR STREET, NEW YORK 6, N. Y.**

*Branch Offices in Principal Cities of United States and Latin America*




Vol. 11

# BADGER meters conserve it!

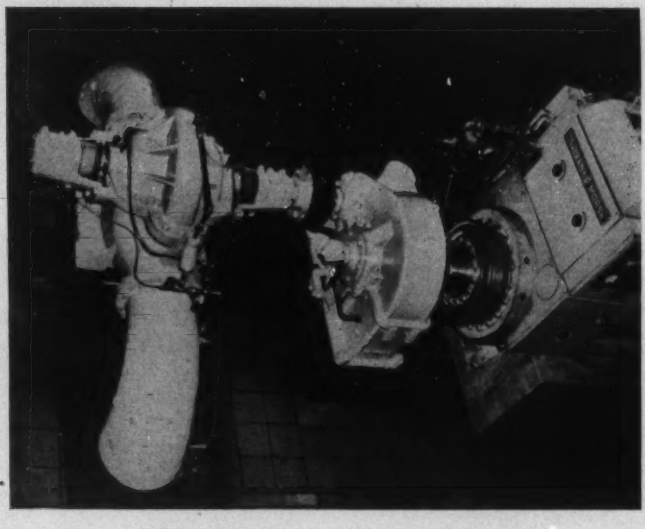
Water saves lives in emergencies... and millions of gallons are required for fire-fighting alone each year. Badger water meters help thousands of communities to conserve water for such needs... measure water precisely for homes and industry ... provide an accurate check on water usage and water waste. And the record of Badger meter performance, known everywhere, has caused thousands of waterworks men to say—"It pays to choose Badger!"

**BADGER WATER METERS**

BADGER METER MFG. CO., Milwaukee 45, Wisconsin

*"Measuring the water of the world"*

# ANOTHER FAIRBANKS-MORSE LEADER



**12"x14" Fairbanks, Morse Figure 5814 Pumps**

Pictured above is a bird's eye view of one of the two 12" x 14" Fairbanks, Morse Figure 5814 Double Suction Horizontal Split Case Centrifugal Pumps, supplying the Arlington, Arlington Heights and Belmont sections of the Metropolitan District Commission's Water Division.

Each of these two pumps rated at 6000 G.P.M. at 220 TDH is driven by an eight cylinder Model 31A8½ Fairbanks, Morse Diesel Engine.

Installed in early 1953 as part of the MDC's new expansion program, both pumps take suction from the Wachusett Reservoir, Clinton, Massachusetts, distributing main and boost the pressure in the area served.

A trained Fairbanks, Morse Engineer is on hand to help solve YOUR pumping problems.

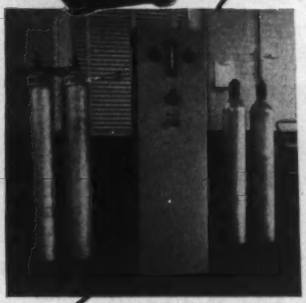
*Write or telephone to:*

## FAIRBANKS, MORSE & CO.

**178 Atlantic Avenue** **Boston 10, Massachusetts**

**Telephone: LAfayette 3-3600**

# .....Call on the New England Sales Office of B-I-F Industries...



Builders Model DVS-M Chlorinizer at Pennichuck Water Works, Nashua, N. H.

**PROPORTIONEERS**
feeding and proportioning equipment for solutions . . . . . .

•

**OMEGA**
volumetric and gravimetric feeders for dry and fluid materials . . . . . .

•

**BUILDERS**
equipment for recording, indicating, and controlling

**BOSTON OFFICE**
80 Boylston Street
Boston 16, Mass.
**Telephone: HAncock 6-1060**

**HOME OFFICE**
345 Harris Ave., Providence 1, R. I.
**Telephone: GAspee 1-4302**

**HENRY M. MAUTNER**
Manager

•

**GERALD H. LAMPREY**
Maine

•

**RUDOLPH H. GRUNER**
New Hampshire & Vermont

•

**JOHN M. D. SUESMAN**
Rhode Island & Eastern Mass.

•

**LORRIN S. BRICE, JR.**
Western Massachusetts

•

**FRANK A. SHAW**
Connecticut

•

**ROBERT F. KELSEY**
Boston Office

•

**JULES E. BANVILLE**
Providence Office

B·I·F

# B-I-F INDUSTRIES

METERS
FEEDERS
CONTROLS

*Coupling and Pipe made of strong, corrosion-resistant asbestos-cement Transite*

# cuts installation costs through fast assembly — insures locked-in tightness

PIPELINE ASSEMBLY can be made easy and fast with the Johns-Manville Transite® Ring-Tite® Coupling. This is the new asbestos-cement coupling for Transite Pressure Pipe that gives every joint locked-in tightness.

### Record savings achieved

The Ring-Tite Coupling is effecting installation savings every place it is used. Every step of the way, its special advantages and automatic features pay off.

The Ring-Tite coupling automatically aligns and adjusts for expansion. Rings are simply popped into grooves and pipes pulled together.

Pipe ends are automatically separated within the coupling. This provides for expansion and flexibility . . . permits line to conform to curves . . . to withstand shock and vibration . . . to relieve line stresses.

With the Transite Ring-Tite Coupling, no complicated equipment is required. Installations can be successfully completed under adverse weather, temperature or terrain conditions. And the Ring-Tite Coupling is listed by Underwriters' Laboratories, Inc.

### Savings at fittings, valves and hydrants, too

The Ring-Tite Coupling will permit savings of money and time by joining pipe directly to fittings, valves and hydrants embodying the Ring-Tite design.

For further information write to Johns-Manville, Box 60, New York 16, N. Y.

JM

## Johns-Manville
## TRANSITE PRESSURE PIPE

Central Tank—500,000 gallon Double-Ellipsoidal design. Tower height 48 ft 4 ins.

# BALANCED WATER STORAGE

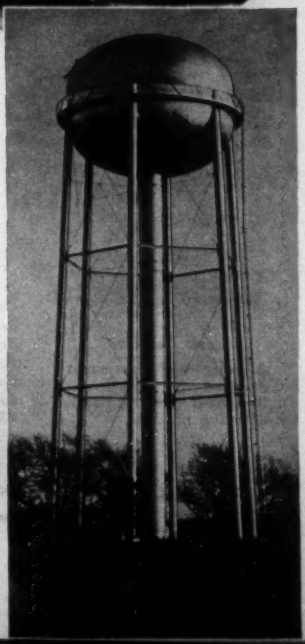
## AT DARTMOUTH, MASS.

North Tank—500,000 gallon Double-Ellipsoidal unit. Tower height 39 ft.

# PITTSBURGH •DES MOINES

# *Elevated Steel Tanks*

The widely-spread community of Dartmouth, Massachusetts enjoys dependable water service at uniform pressures, thanks to three strategically-located P-DM Elevated Steel Tanks. The first tank, built in 1947, served the central area. Recent addition of the North and South units provides a completely balanced storage system. *Write for our Modern Water Storage Brochure.*



**PITTSBURGH • DES MOINES STEEL CO.**

Plants at PITTSBURGH, DES MOINES and SANTA CLARA

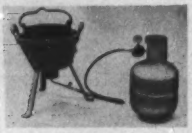
Sales Offices at:

| | |
|---|---|
| PITTSBURGH (25) | 3424 Neville Island |
| NEWARK (2) | 221 Industrial Office Bldg. |
| CHICAGO (3) | 1228 First National Bank Bldg. |
| LOS ANGELES (48) | 6399 Wilshire Blvd. |
| DES MOINES (8) | 925 Tuttle Street |
| DALLAS (1) | 1279 Praetorian Building |
| SEATTLE | 532 Lane Street |
| SANTA CLARA, CAL. | 631 Alviso Road |

South Tank—300,000 gallon Double-Ellipsoidal design. Tower height 104 ft 3 ins.

# Pipe Line Equipment
# WATER · GAS · SEWER

**Bottled Gas Lead Melting Furnace**

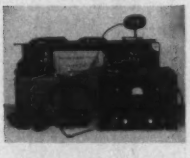


**Asbestos Joint Runners**

Best quality asbestos rope, brass caps attached to each end. Equipped with clamps.

**M-D Cut-In Connections for Sewers**

A light cast iron fitting with bell end for connecting house service with main sewer pipe without necessity for placing a Y-branch or T-branch in the sewer line.



**Leak Detector**

A truly fine instrument designed to solve even the most difficult leak detecting problem.

**Calking Tool Outfit**

For water mains up to 12". Strong leather bag. Keeps the right tool for every job within easy reach.

**Test Plugs for Bell or Spigot End Cast Iron Pipe.**

**On this page are shown only a few of the hundreds of items to be found in the POLLARD Catalog. Write for a copy of Catalog No. 25F.**

**Portable Lead Melting Furnace**

A handy outfit for quick action, equipped with gasoline burner.

**Pipe Cutter**

Inexpensive way of cutting pipe. Every wheel in contact with the pipe is a cutting disc, so cutter need be moved only a short distance to cut entirely around the pipe.

**Tapax**

The original manhole cushion. Takes the bang out of manhole covers.

**M-Scope Pipe Finder**

It's easy to locate a buried pipe line with this handy pipe finder.

## JOSEPH G. POLLARD CO., INC.

**Western Office**
**1064 Peoples Gas Bldg.**
**Chicago, Ill.**

**MAIN OFFICE AND FACTORY**
**New Hyde Park, N. Y.**

**Southern Office**
**333 Candler Bldg.**
**Atlanta, Ga.**

# Table of Contents


PAGE

Portrait of President William B. Duffy ..... Frontispiece

Deterioration of the Hydraulic Capacity of Pipelines
By Alexander J. Minkus ..... 1

Action of Ozone on Water-Borne Bacteria
By J. M. Dickerman, A. O. Castraberti and J. E. Fuller ..... 11

Investigation of the Continuous Recording of Fluoride Concentration in Water
By Kenneth F. Knowlton ..... 16

Report of Committee on Rainfall and Yield of Drainage Areas, September, 1953—Rainfall in New England:
Part I. Rainfall in Massachusetts ..... 39

Proceedings:
November 1953 Meeting ..... 93
December 1953 Meeting ..... 94

*Fabian Bachrach*

WILLIAM B. DUFFY

President of the New England Water Works Association, 1953-1954

New England Water Works Association
ORGANIZED 1882

VOL. LXVIII MARCH, 1954 NO. 1

*This Association, as a body, is not responsible for the statements or opinions of any of its members*

# DETERIORATION OF THE HYDRAULIC CAPACITY OF PIPELINES

BY ALEXANDER J. MINKUS*

[*Read at Superintendents' Round Table, Jan. 22, 1953.*]

Most of us living in the New England area are sadly familiar with the corrosive effects of our water on metals and the resulting reduction in capacity of iron pipelines. Our waters can materially reduce the capacity of concrete mains as well, but by an action that differs from corrosion. Experience with the water supply of Hartford substantiates this statement. Here there is a very soft surface supply with an average hardness of about 14 ppm, an alkalinity of 12 ppm, pH 6.6, color 20 ppm, and turbidity rarely over 1.5 ppm.

Two mains carry this water to the filter plant from the upland sources, one a 42-inch, cement-lined cast-iron pipe and the other a 36-inch, Lock Joint concrete pipe. Both have lost their carrying capacity by a very significant amount in a short time. The background of this situation is as follows:

For 22 years, a single 42-inch cast-iron main with no lining delivered the water from the main source, the Nepaug Reservoir, to the filter plant. The corrosive quality of a water with these characteristics quite understandably reduced its hydraulic capacity and this circumstance, coupled with increased demands for water, made it necessary in 1942 to construct another line parallel to this one. A 36-inch Lock Joint pipe was installed, tested and found capable of delivering a maximum of 35 mgd, the test indicating a Williams-and-Hazen coefficient of 150.

It was now possible to take the 42-inch cast-iron main out of service, clean it and apply a ¼-inch cement lining. This was done by the Lock Joint Pipe Co. in 1945 and, on completion, the line was tested and showed a coëfficient of 137, or a capacity of 50 mgd. One of the

* Engineer of Purification, Water Bureau, Metropolitan District, 115 Broad St., Hartford, Conn.

contract provisions for this work stipulated that the lining was to be guaranteed to remain sound for two years. Accordingly, in 1947 a flow test was made and, to our dismay, showed that the capacity had dropped from 50 to 44 mgd, and that the Williams-and-Hazen coefficient was now only 120. We unwatered the line, fully expecting to find a considerable portion of the lining spalled off, but surprisingly enough it was all intact and smooth. However, it was covered with a very thin coat of dark-colored slime. We crawled through the whole seven miles of this line to check this and found all the lining to be in good mechanical condition, and no obstructions of any kind.

While this was going on in the 42-inch cast-iron main, we of course had to use the 36-inch Lock Joint pipe, built in 1942. To our further dismay it was discovered that this line could no longer deliver the original capacity of 35 mgd, but only 27 mgd, equivalent to a Williams-and-Hazen coëfficient of 114, or a reduction in capacity of 23% in 5 years. The line was unwatered, and we crawled through its 7-mile length and again found the interior surface hard and smooth, but covered with the same dark-colored slime.

To dispel any thought that these deteriorations were just initial changes that stopped immediately thereafter, there is shown on Figure 1 a record of the coëfficients obtained in subsequent years. This is a schematic diagram of our supply mains, showing the coëfficients for the various sections and the date they were obtained. It is apparent that the deterioration had continued, but at a much slower rate. The latest tests, made in December, 1952, show that the 42-inch cement-lined main now has a coëfficient of 106, compared to 137 in 1945, while the corresponding figures for the 36-inch concrete pipe are from 150 to 111 in the ten years between 1942 and 1952.

The coëfficients obtained in 1949 and subsequently are believed to be of a high degree of accuracy. Fortunately there is a high hill adjacent to the upstream junction of the 42- and the 36-inch mains. To obtain the hydraulic gradient, a garden hose was attached to 8-inch branches on these mains and extended some 1,000 ft horizontally and 175 ft vertically, until the water column could be observed in a glass tube. The ends of these mains discharge into a conduit which flows partially full; therefore, the elevation of the water surface could be readily obtained here. Bench marks have been established at the

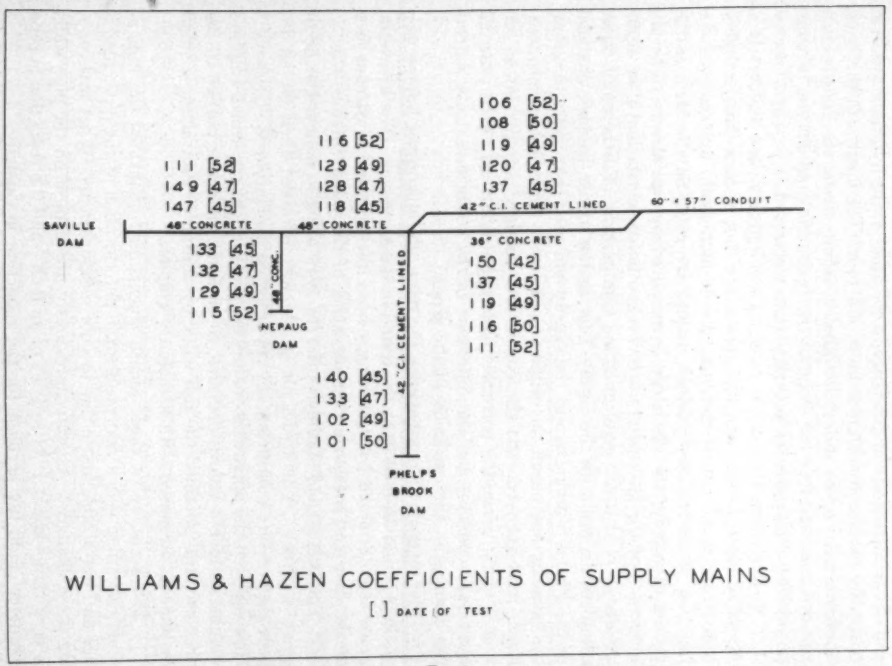

106 [52]
108 [50]
119 [49]
120 [47]
137 [45]
42" C.I. CEMENT LINED
60" x 57" CONDUIT
111 [52]
149 [47]
147 [45]
116 [52]
129 [49]
128 [47]
118 [45]
SAVILLE DAM
48" CONCRETE
48" CONCRETE
36" CONCRETE
150 [42]
137 [45]
119 [49]
116 [50]
111 [52]
133 [45]
132 [47]
129 [49]
115 [52]
48" CONC.
NEPAUG DAM
42" C.I. CEMENT LINED
140 [45]
133 [47]
102 [49]
101 [50]
PHELPS BROOK DAM
WILLIAMS & HAZEN COEFFICIENTS OF SUPPLY MAINS
[ ] DATE OF TEST

FIG. 1.

end of each line and the difference in elevation of the hydraulic gradient is readily measured within a tenth of a foot. The lengths of the lines, approximately seven miles, are known exactly from our construction surveys and therefore the slope of the hydraulic gradient can be computed with much greater accuracy than warranted.

To determine the volume of water flowing, there are Builders Iron Foundry venturi tubes and registers at the foot of each dam. In addition, there is a venturi meter in the 48-inch main, upstream of the junction of the 42- and 36-inch mains. By using Saville Dam as the source of supply, the discharge is measured by two meters. The adjustments of the two meters are checked before a test and they agree within ¼ mgd in 27 mgd, or about one percent. Furthermore, after completing a test with the Saville Dam as the source, we have changed to the Phelps Brook Dam as the supply and used that meter to obtain the quantity and check the original coëfficient. Under these considerations, it is believed that the coëfficients obtained are correct within 1 or 2 units. Since the tests are made in the same way each year, all errors are constant and the difference in the coëfficients truly reflects the changes in the condition of the pipe.

The sections of line between the dams and this upper intersection of the 42- and 36-inch lines are tested in the same way. The hydraulic grade is determined by extending a hose line up the downstream face of the dam and measuring the elevation of the water column.

The coëfficients obtained prior to 1949 are also believed to be of good accuracy. The hydraulic grade was obtained then by an ingenious pressure-measuring device, designed by Harold W. Griswold.* He employed the apparatus for testing pressure gauges, which employs weights to give a known pressure, to measure the major portion of the pressure, and obtained the full value by adding or subtracting a small increment, measured with a mercury column.

The accuracy of these measurements just confirmed the indications that there was a real problem in deterioration of the pipe capacities and not a false alarm due to poor measurements. What was causing these changes? As stated previously, the deposit on the pipe walls is very thin—about 1/32 to 1/16 of an inch—and the reduction in pipe diameter could not account for the reduction in capacity.

* Consulting Engineer and Past President of the New England Water Works Association.

Immediately on un-watering a pipeline, the slime looks and feels very smooth. We wondered if this remained true when there was water in the pipe; therefore, we adjusted the flow in one of the mains so that the water just filled the main at one of the high points in the line, where there was an access manhole. On reaching into the pipe through the manhole and feeling the pipe wall, it could be said with a little imagination that there was a rougher feeling to the deposit. With the elimination of all other conceivable causes, it must be the character of this deposit which has reduced the capacity of the mains.

We, of course, wanted to know what the constituents of this deposit were. Upon examination under the microscope, there were no algal forms visible—only a mass of amorphous matter. The chemical analysis proved very interesting. Some of this slime deposit was scraped gently from the interior of the 36-inch main, dried at 103°C. and analyzed for the chemical constituents. The dried material was 11% by weight of the wet deposit, the moisture depending on the length of time before the sample reached the laboratory.

Figure 2 is a graph of five analyses made on samples taken along the length of the pipe in the direction of water flow. It shows that the largest portion of the material was manganese, ranging between 30 and 47%. There was about 20% of organic matter, or possibly carbonates, as measured by the loss-on-ignition test. The iron content ranged between 8 and 20%. The remainder consisted of silica, calcium and magnesium, which could have been scraped from the pipe wall, even though the deposits were removed with gentle scraping.

From this it appears that the deposit was mostly manganese and iron, with organic material serving as a binder. Yet, we had never experienced colored-water troubles which could be attributed to manganese. As infrequent tests of the past had shown barely measurable amounts of maganese in the water, this was not a routine test with us.

After analyzing the pipe deposits, we considered it advisable to make a test and look for increases in the manganese concentration. But a test on the water collected at the intake of Phelps Brook Dam showed only 0.008 ppm of manganese. A sample collected on the same day from the discharge end of the supply mains showed a concentration of 0.004 ppm. Although the concentrations were small, it was significant that there was a 50% reduction, indicating that some manganese was being left behind in the pipe line.

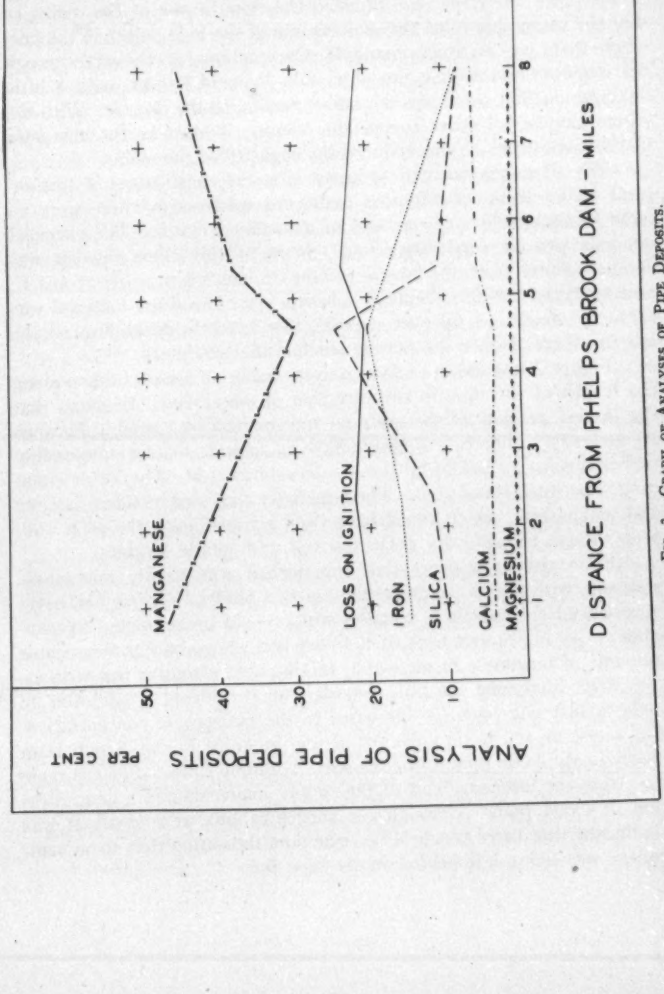



FIG. 2.—GRAPH OF ANALYSES OF PIPE DEPOSITS.

To check the probability that the manganese concentrations varied seasonally, we started to make monthly tests for manganese and iron on water in the Barkhamsted Reservoir, which is back of Saville Dam, taking the samples 30 ft below the water surface, on the same level as the intake which is generally used. The reservoir is about 120 ft deep at this point. Barkhamsted Reservoir was selected for these tests because, in 1947, the pipeline from this reservoir had been used very little and it had an excellent coëfficient of 149. Therefore, if there were to be any changes in its capacity, it was desirable to correlate them with changes in character of the water.

In addition, we wanted to find out if the iron and manganese were peculiar to our Nepaug Reservoir, which was about 30 years old then, or if they would also occur in the new Barkhamsted Reservoir. The operating procedure here is such that if a simple expedient like blowing off bottom water would prevent difficulties with the mains, we could find out by using this reservoir. Because of certain riparian rights, we are compelled to discharge some 13 billion gallons of water annually into the stream below the Barkhamsted Reservoir. As this water is used largely for power generation, these demands are met with bottom water. Barkhamsted Reservoir has a total capacity of 32 billion gallons. Therefore, an annual draft of at least 13 billion gallons from the bottom should minimize the effect of mixing bottom water with the rest of the reservoir during the turn-over periods.

The results of the analyses obtained under these operating conditions from 1947 through 1949 are shown in Figure 3. It is apparent that the iron and manganese concentrations vary with the seasons, the peaks occurring in the fall and winter months. There is a break in the record for the early part of 1949 because of a change in laboratory personnel.

In an attempt to find what caused the variations, there are plotted the curves of the temperature of the water, pH, alkalinity, carbon dioxide, iron and manganese. The carbon dioxide appears to have the same cycle as the iron and manganese, and the peaks occur in the vicinity of the turn-over temperature. A plot of the total algae count on this chart showed no similiarity to the pattern of the iron and manganese curves. There is the possibility that a count of the individual organisms might have shown some similitude. However, at no time

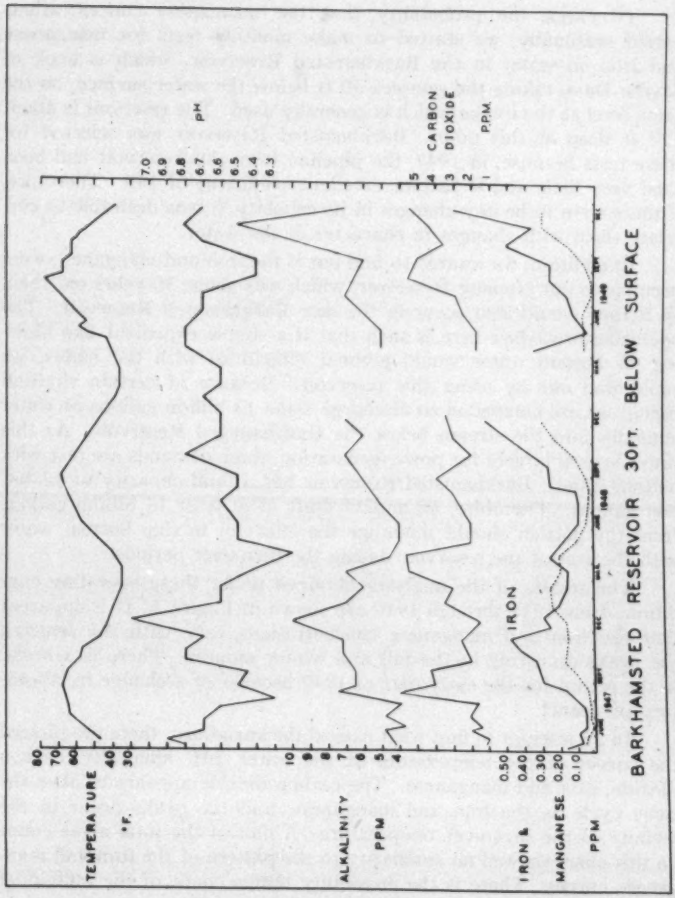

BARKHAMSTED RESERVOIR 30FT. BELOW SURFACE
TEMPERATURE °F.
80
70
60
40
30
ALKALINITY PPM
10
9
8
7
6
5
4
IRON & MANGANESE PPM
0.50
0.40
0.30
0.20
0.10
IRON
pH
7.0
6.9
6.8
6.7
6.6
6.5
6.4
6.3
CARBON DIOXIDE PPM.
5
4
3
2
1
1947
1948
1949

FIG. 3.

were *Crenothrix* or *Leptothrix*, the organisms commonly known as iron utilizers, found in the water.

Because the carbon-dioxide curve seemed to bear some relation to the curves of iron and manganese, it appeared advisable to find out what happened to the carbon dioxide as the water flowed through the pipes. Samples were collected one day along the 36-inch concrete pipe at spaced time intervals, calculated to intercept the same unit volume of water as it flowed through the pipe. The following results were obtained:

| Distance from source | Carbon dioxide | pH |
|---|---|---|
| At the reservoir | 2.42 ppm | 6.78 |
| 1 mile | 1.47 | 6.95 |
| 2½ miles | 1.30 | 7.06 |
| 7 miles | 0.80 | 7.19 |

At the reservoir the iron and manganese increase with increases in carbon dioxide and in the pipelines, where the iron and manganese are deposited, the carbon dioxide decreases. However, carbon dioxide is probably not the sole cause of the pipe deposits. With manganese there is always the possibility of catalytic action, once some manganese is deposited. Moreover, the pipe deposits had a high percentage of organic matter, and whether this is a cause or an effect of iron and manganese deposits remains to be proved.

What can be done to restore the hydraulic capacity of mains fouled in this manner? We dosed a mile-long section of the 42-inch, cast-iron, cement-lined pipe below Phelps Brook Dam with 50 ppm of chlorine for eleven days and then flushed it at a velocity of 6 ft per sec for ½ hr, and obtained a highly-colored and turbid effluent. Similar flushing before chlorination had given a relatively clear water. Friction coëfficients before and after dosage with chlorine were 111 and 133, indicating a material improvement.

It was probably unnecessary to use a dose as high as 50 ppm, because there was a considerable amount of chlorine at the downstream end of the mile section of pipe being dosed. A visual examination of the interior of the pipe, after this treatment, showed there was a substantial reduction in the coating; however, it was not entirely removed. Although this dose of chlorine improved the hydraulic capacity of the

pipe, the single dose did not prevent a recurrence of the deposits. A test, made two years later, gave a Williams-and-Hazen coëfficient of only 102. This indicates that, once the interior of the pipe has been cleared, a program of continuous treatment is necesary to prevent deposit of iron and manganese on the pipe wall.

Our policy has been to observe the rate of change in the pipe coefficients, with the expectation that they will be stabilized at some point. The slower rate of deterioration in the past few years encourages this belief. At present, since there is sufficient capacity in the mains to take care of ordinary demands, the expense of a continuing maintenance program does not seem warranted.

The early stages of this investigation were carried out under the supervision and guidance of Caleb M. Saville, former Manager and Chief Engineer of the Water Bureau, and the more recent work was done under William A. D. Wurts, Manager of the Metropolitan District, and Warren A. Gentner, Chief Engineer of the Water Bureau.

# ACTION OF OZONE ON WATER-BORNE BACTERIA‡

BY J. M. DICKERMAN, A. O. CASTRABERTI AND J. E. FULLER*

[*Received July 23, 1953.*]

For a number of years ozone has been used in a number of water-treatment plants in Europe for the destruction of water-borne bacteria (1). In order to obtain sufficient production of ozone with the equipment employed, the air must be cooled and water vapor and particulate material removed. This procedure necessitates the use of closed ozone generators, and the consequent cost of ozone generation has been too high to encourage its use for the treatment of public water supplies in this country instead of the less expensive chlorination process. Ozonation has been tried in a few localities in the United States, but its use is not common, and its principal application has been for the removal of tastes, odors and color from water.

Open ozone generators have not been used much because the production of ozone has been inefficient and has been accompanied by the production of hydrogen peroxide and oxides of nitrogen. In recent years, however, open generators have been developed which may overcome these objectionable features and provide an economical and efficient means for the treatment of municipal and rural water supplies.

An open brush-type ozone generator was made available to this laboratory through the courtesy of a near-by manufacturer.** Preliminary tests by the methods of Arnold and Mentzel (2), Erlwein and Weyl (3), and Eschbaum (4) indicated the presence of ozone and the absence of hydrogen peroxide and nitrous oxides in the atmosphere produced by the apparatus. Hence, the study here reported was undertaken to determine the possible bactericidal effect of ozone on bacteria commonly appearing in water.

## Experimental

A spectrum of pathogenic and non-pathogenic bacteria, which may be found in water (5), was employed in these experiments. A

‡ Contribution No. 894, Massachusetts Agricultural Experiment Station, Amherst, Mass.
* Department of Bacteriology, Massachusetts Agricultural Experiment Station, Amherst, Mass.
** Norwood Filtration Co., Holyoke, Mass.

list of the cultures appears in Table 1. Various concentrations of each culture were suspended separately in 100-ml quantities of sterile tap water and subjected to the action of ozone in a glass tube that had a fritted glass disperser fitted into it. Ozone was drawn into the system by suction and dispersed into the bacterial suspensions as a fine stream of bubbles.

The bacterial suspensions were exposed to different concentrations of ozone, for different time intervals at 28°C. At the end of a desired time interval, 1-ml and 5-ml portions were withdrawn from the ozonated suspensions. The 5-ml portions were used for the determinations of residual ozone by generally accepted methods (6) (7). The procedure involved the absorption of the residual ozone in a neutral potassium-iodide solution to liberate free iodine, which was titrated with standardized sodium thiosulphate solution. Starch solution was used as the indicator.

TABLE 1.—THE EFFECT OF OZONE ON PURE CULTURES OF BACTERIA SUSPENDED IN TAP WATER

| Organism | Smallest initial count in thousands per ml | Required ozone residual (ppm) | Required time of exposure (min) | Greatest initial count in thousands per ml | Required ozone residual (ppm) | Required time of exposure (min) |
|---|---|---|---|---|---|---|
| *Staph. aureus* | 10 | 1.7 | 1 | 50 | 1.0 | 3 |
| *Staph. albus* | 20 | 0.95 | 1 | 55 | 2.0 | 1 |
| *Mic. citreus* | 25 | 1.0 | 1 | 45 | 1.2 | 1 |
| *Gaf. tetragena* | 52 | 1.5 | 1 | 1,000 | 1.5 | 1 |
| *Esch. coli* | 2.2 | 0.9 | 1 | 1,000 | 0.95 | 1 |
| *Esch. coli, var. communior* | 23 | 0.95 | 1 | 47 | 1.2 | 1 |
| *Aero. aerogenes* | 25 | 1.0 | 1 | 90 | 0.3 | 3 |
| *Aero. cloacae* | 1,000 | 0.5 | 1 | 1,000 | 0.4 | 3 |
| *B. subtilis* | 12 | 1.5 | 3 | 70 | 1.5 | 5 |
| *B. citreus* | 7 | 1.0 | 1 | 10 | 1.2 | 1 |
| *B. cereus* | 2 | 0.8 | 1 | 3 | 1.2 | 1 |
| *Sal. enteritidis* | 52 | 1.55 | 1 | 80 | 1.7 | 1 |
| *Sal. typhi* | 85 | 1.85 | 3 | 1,000 | 2.2 | 1 |
| *Ser. marcescens* | 50 | Trace | 1 | 90 | Trace | 1 |
| *Ps. fluorescens* | 10 | 1.3 | 1 | 95 | 1.5 | 1 |
| *Ps. aeruginosa* | 12 | 0.5 | 1 | 60 | 1.0 | 3 |

The 1-ml portions were placed in sterile petri dishes, which were agitated gently for several minutes to dissipate any residual ozone. Nutrient agar (Difco) was poured into the plates, mixed with suspensions, and allowed to solidify. The plates thus made were incubated for 48 hours at 37°C., and then colony counts were made. The concentration of ozone and the time necessary for complete killing were determined from these data for each organism employed. Table 1 is a composite table of results, in which are shown the minimum concentration of ozone and the minimum time required for complete killing in suspensions with the largest and smallest numbers employed for each organism.

To test the effect of ozone on the naturally-occurring bacterial flora of raw water, samples were taken from near-by streams and treated with ozone by the same procedure as was employed with the bacterial suspensions. Some of the samples gave high initial bacteria counts, as shown in Table 2, which shows also the concentration of ozone and the time required to reduce the bacteria counts to zero.

TABLE 2.—EFFECT OF OZONE UPON BACTERIAL CONTENT OF RAW WATER FROM STREAMS

| Sample no. | Bacteria per ml, initial count | Required ppm ozone residual | Required time of exposure (min) |
|---|---|---|---|
| 1 | 20 | 1.6 | 1 |
| 2 | 130 | 1.7 | 1 |
| 3 | 2,700 | 1.9 | 1 |
| 4 | 3,200 | 2.1 | 1 |
| 5 | 4,000 | 2.35 | 3 |
| 6 | 41,000 | 1.5 | 3 |
| 7 | 72,000 | 1.3 | 1 |

## RESULTS AND COMMENT

The results obtained with the suspensions of bacteria indicated a marked bactericidal action by the ozone when negligible amounts of organic material were present. In every instance, except with *Bacillus subtilis*, a residual concentration of 2 ppm, applied for one minute, was capable of destroying the concentrations of bacteria employed. The larger concentration of ozone and the longer exposure time required for killing of *B. subtilis* possibly may be explained on the basis

that this is a sporulating organism and that the spores are more resistant than vegetative cells to the action of ozone. Fortunately, such organisms are of no sanitary significance in water.

Of the samples of raw water, represented in Table 2, samples 4 and 5 contained relatively large amounts of organic matter, and larger concentrations of ozone were required to destroy given numbers of bacteria than would have been required in the absence of organic material. Some of the ozone probably was bound by the organic matter present in the water and thus rendered unavailable for the killing of bacteria. These results indicate that, for best results, it is desirable that the water be treated to reduce the organic-matter content before treating it with ozone.

On the basis of the results presented here, a water-treatment installation would have to maintain an ozone residual of 2 ppm for at least five minutes to treat dependably raw water with a low content of organic matter. This residual is larger than that of chlorine commonly used. However, ozone readily oxidizes compounds in water that cause tastes and odors, while chlorine not only does not remove these compounds but reacts with them to cause tastes and odors that may be objectionable at times.

Additional experiments done in this laboratory, but not detailed in this paper, indicated that ozone is more effective than chlorine for controlling algae and protozoa in water. In one instance, 15 ppm of ozone applied for three minutes was capable of destroying a protozoan species that had resisted 250 ppm of chlorine for a much longer time.

The data presented in this paper are only indications of the possible value of ozone for water treatment. Further studies, with an open-type ozone generator actually operating as a water-treatment system, would be necessary to establish the effectiveness of ozone as compared with chlorine for the practical treatment of water supplies. The value of such studies seems to be indicated.*

## Summary

The bactericidal action of ozone, generated by an inexpensive, open brush-type ozonator, has been studied with suspensions of pure cultures of bacteria and with the naturally-occurring bacteria of raw

* After this study had been completed, an article by Powell *et al.* (8), reported the use of ozone in a pilot water-supply plant. The main objective was the control of tastes and odors, but 99.4% reduction of coliform bacteria was reported.

waters from streams. With bacterial suspensions containing little organic matter, ozone was strikingly effective in killing the bacteria. With raw waters that contained a considerable amount of organic matter, larger concentrations of ozone and longer application periods were needed, because the organic matter appeared to inactivate some of the ozone. Results with raw water indicated that an ozone residual of 2 ppm, applied for at least 5 minutes, would be required to treat satisfactorily raw water of low organic content. Further studies under practical operating conditions would be desirable.

## References

1. Welsbach Corp. A critical review of the germicidal properties of ozone. Philadelphia, 1951.
2. Arnold and Mentzel, 1902. Cited from the Merck Index, 5th ed., p. 631, 1940.
3. Erlwein and Weyl, 1898. Cited from the Merck Index, 5th ed., p. 712, 1940.
4. Eschbaum, 1897. Cited from the Merck Index, 5th ed., p. 713, 1940.
5. Prescott, S. C., Winslow, C.-E.A., and McCrady, M. H. Water Bacteriology. 6th ed. John Wiley and Sons, Inc., 1947.
6. Treadwell, R. P., and Hall, W. T. Quantitative analysis, analytical chemistry, 7th ed. John Wiley and Sons, Inc., 1930.
7. Furman, M. H., 1939. Scott's Standard Methods of Analysis, 5th ed. D. Van Nostrand Co., New York.
8. Powell, M. P., Drummond, K. G., Saavedra, C., Evans, F. M., Morgan, P. F., and Fisher, N. B. Action of ozone on tastes and odors and coliform organisms. J. Amer. Water Works Assoc., 1952, 44, pp. 1144-1150.

# INVESTIGATION OF THE CONTINUOUS RECORDING OF FLUORIDE CONCENTRATION IN WATER

BY KENNETH F. KNOWLTON*

[*Read September 30, 1953.*]

When it became known that the Salem and Beverly Water Supply Board was to commence with the fluoridation of its water supply, we were approached by The Foxboro Company, requesting our cooperation in a field trial of fluoride-concentration recording equipment, using an electrical Conductivity Difference Recorder. Our plant was considered appropriate for this trial by location and because the plant is constantly attended and has adequate laboratory facilities.

An adaptation of the use of electrical conductivity is the basis of the method of fluoride recording which was used in this study. We all know that when salt is added to water an electric current will pass through the water more easily than it would without the salt. Any material which ionizes in water will show this same characteristic to some extent, and instruments have long since been developed to measure minute changes in the electrical conductivity of water. Procedures and definitions have been adopted for discussing these phenomena.

Electrical conductivity is the reciprocal of electrical resistance or one divided by resistance expressed in ohms $\frac{1}{\text{ohm}}$. The word "mhos" (ohms backwards) is used to express units of conductivity. Specific conductivity is the conductivity at a given temperature of the material under test, as measured by two platinum plates, each one square centimeter in area and placed one centimeter apart. Since the conductivity is usually low (resistance high), we normally speak of "micromhos," or units of millionths of a mho.

In the measurement of fluoride, arrangements are made to determine the specific conductivity of the water before fluoride addition and again after the addition of the chemical. At Salem-Beverly the

* Superintendent-Chemist, Salem and Beverly Water Supply Board, North Beverly, Mass.

base conductivity of the water is in the order of 145 micromhos at 25° C.

Since both sodium fluoride and sodium silicofluoride ionize in water, there is a change in the conductivity of the water when they are added. If the measurements are delicate enough and all other factors, except the added fluoride, can be eliminated, we have a good method for adaptation to continuous analysis for the amount of the material which is added to the water. The remainder of the paper will describe the particular equipment we used and the results obtained.

In practice, other materials than platinum are used in the construction of cells. The cells in this application are constructed of carbon and are illustrated in Fig. 1. These cells consist of two carbon electrodes of fixed characteristics, so mounted that they are rugged and can be inserted through a 1¼-inch valve in the side of a pipe. They are designed to stand pressures up to 150 psi. Two cells are needed in each installation, as has been mentioned earlier.

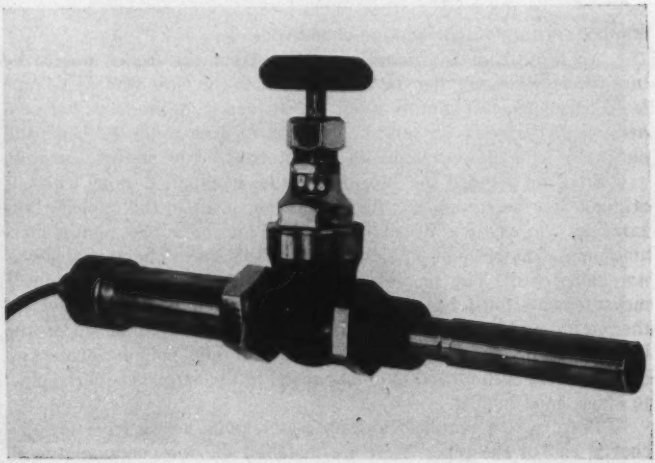


FIG. 1.—ELECTRICAL CONDUCTIVITY CELL, INSERT TYPE (*Courtesy of The Foxboro Co.*)

An instrument has been devised which imposes a 1,000-cycle electric current upon both cells and then measures the conductivity at one cell against that of the other. Through suitable electronic amplification, the difference in electrical conductivity at the two cells is converted to mechanical motion of a pen arm, this giving a continuous record of the difference in micromhos due to the added fluoride salt.

Since conductivity is also related to temperature, it is important that both cells operate at the same temperature or at constant temperature differential. This requirement was considered easy to meet in water-works practice. However, in order to have proof, we installed temperature bulbs with each conductivity cell and connected these to a Temperature Difference Recorder.

Both recorders were mounted in a suitable cabinet, located in the laboratory (Fig. 2). The lower case holds the temperature recorder and the upper unit is the fluoride recorder.

The Salem and Beverly Water Supply Board chose sodium silicofluoride as the material to use in treating its water. The Board also selected a Wallace & Tiernan Type A-635 Volumetric Fluoridizer, equipped with a 40-gal solution chamber.

Application of the fluoride solution from the feeder was to be into the pipeline carrying the filter effluent to the clear-well. This pipe is 30" diameter cast iron, is about 100 ft long from the last filter connection to the reservoir, and contains in its length one ¼ bend and one 1/16 bend. It terminates in an upturned elbow at the clear-well.

Since we planned the fluoride-recorder installation along with our original fluoride equipment, the application point in this pipeline was carefully chosen. We already had points for the application of lime, ammonia, chlorine, and polyphosphate in this line. The ammonia was not being used. The possible effects of all of these on the fluoride measurements must be eliminated. Lime, being fed as a slurry was the major problem. Its application point was moved ahead of the filters with no apparent adverse reactions. The polyphosphate and chlorine were both moved to points ahead of the two bends in the pipe, to cause good mixing.

There was a manhole available at a point 60 ft from the discharge end of the pipe. Here we installed the low-conductivity cell and a temperature bulb, and at a point about 1 ft downstream we

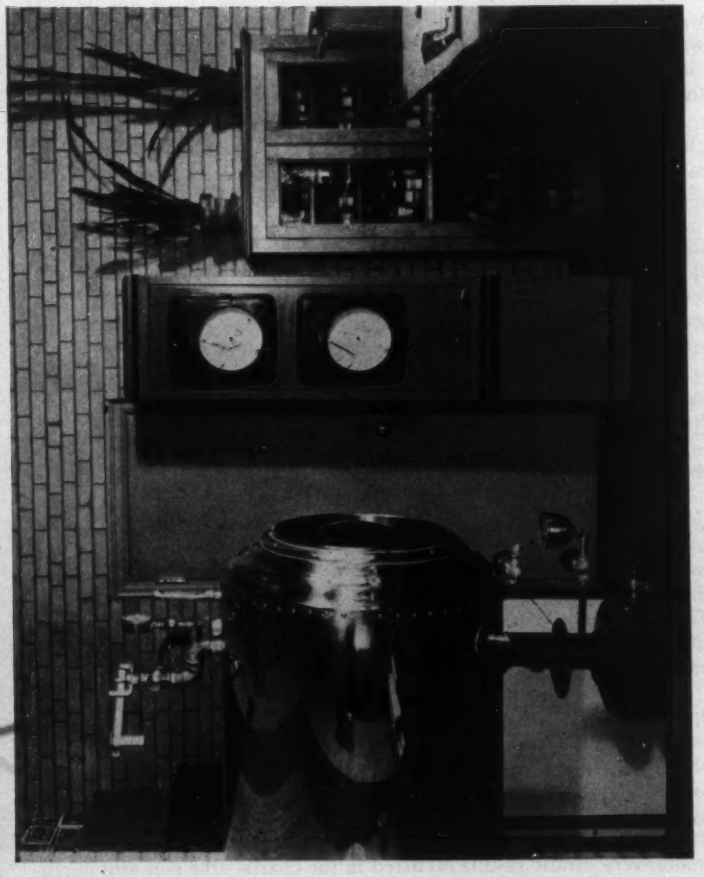


FIG. 2.—FLUORIDE-CONCENTRATION RECORDER INSTALLED IN LABORATORY.

installed the fluoride-solution feed hose. This installation was the best we could do by way of eliminating all effects except fluoride—the water supposedly being stable and finished at the low-conductivity electrode cell, except for the addition of the fluoride salt. Fig. 3 shows these connections and an old sample line in the manhole.

Location of the high-conductivity cell was restricted to the discharge end of the pipe. It was hoped that the fluoride would be thoroughly mixed in the water after passing through 60 ft of straight pipe and into the terminal bend.

The first trial involved the installation of a sampling line from this bend, through a small centrifugal pump, to a chamber at one of the laboratory sinks. The conductivity cell and temperature bulb were located in this chamber. Due to the rise and fall of the reservoir, there was a variable rate of flow through the sample line. Coupled with some priming problems, this produced inconsistent results.

Rather than try to iron out the problems with this line, we relocated the cell for high conductivity directly in the stream emerging from the filter-effluent line.

Fig. 4 shows this installation and the sampling line which is now used for catch samples only. Fig. 5 illustrates the complete set-up.

As we received the instrument and have been using it, the calibration is in micromhos of conductivity difference at the two cells. We were furnished a chart to convert these values to fluoride added to the water. Several chemical tests were run and computations made, and the sum total of these seemed to fall to one side of the original curve. This led to much more extensive calibration studies in The Foxboro Co. laboratories and they are being presented in a discussion of this paper.

Of primary interest was the effect of treatment-plant processes upon the reliability of the instrument. The one material fully expected to give trouble was the lime. Fortunately for our work, the pH of the filtered water reached a point where lime was not needed, just at the time we started this test. We took advantage of this period by experimenting for short periods with lime fed following the filters. The lime slurry being incompletely dissolved as it passed the electrodes, very erratic results occurred in the charts—the pen arm fluctuating violently and barely staying within the limit of the chart.

FIG. 3.—FILTER-EFFLUENT PIPE, FLOW FROM LEFT TO RIGHT.
Connections from left to right are: cell for low conductivity; temperature bulb; discontinued sampling line; sodium silico-fluoride application line.

FIG. 4.—FILTER DISCHARGE AT CLEAR-WATER RESERVOIR.
Sample line to laboratory, ¾" I.D. plastic tubing (*Carlon*); temperature bulb; cell for high conductivity.

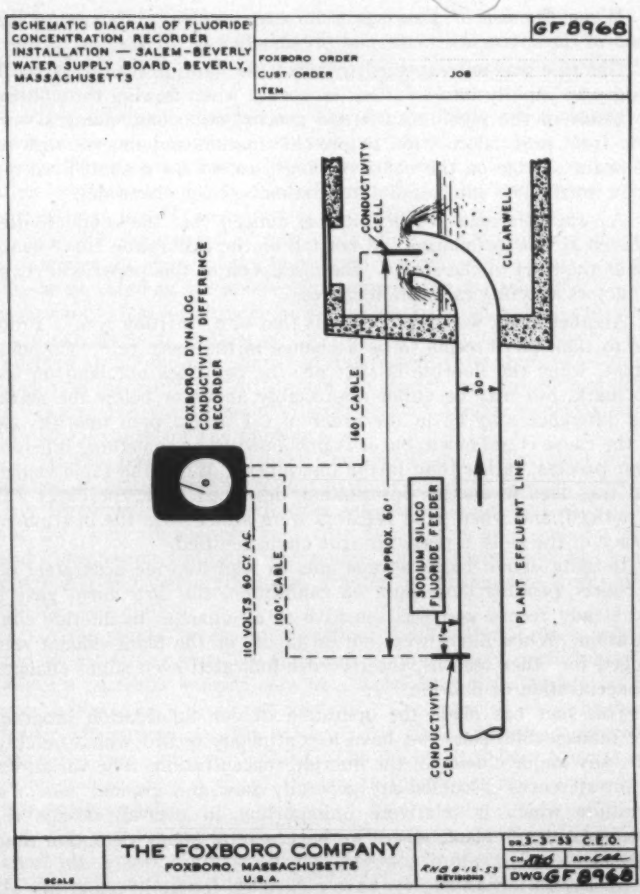



FIG. 5.—SCHEMATIC DIAGRAM OF FLUORIDE-CONCENTRATION RECORDER.

When the use of lime again became necessary, it was applied ahead of the filters, as mentioned previously.

Chlorine was not expected to affect the fluoride reading, since it would pass rapidly into solution, especially when flowing through the two bends in the pipeline. On two specific occasions, changes were made from post-chlorination to pre-chlorination and reverse with no significant change on the chart readings, except for a short-lived dip or rise for the few minutes of stabilization between electrodes.

As was mentioned earlier, it was noticed that the conductivities observed at this installation did not fall on the calibration curve available at the start of the study. The discussion of this paper will cover the factors affecting calibration curves.

Another effect we have noticed is that of a "drifting zero". From time to time there seems to be a change in the basic reference point so that, when the fluoride is shut off, the pen does not land on the zero mark, but may be either appreciably above or below the mark. This difference may be in the order of 0.1 or 0.2 ppm fluoride. So far, the cause is unknown, but it is presumed to be something inherent in our process, rather than in the instrument. When the same instrument was used in another installation, described later, the effect was not noticed, and when fixed resistors were attached to the instrument in place of the cells, a perfectly true circle resulted.

In spite of not being always able to read fluoride accurately off the charts, pending more data on calibration, the instrument gave a good steady record and was sensitive to all changes in fluoride concentration. When filters were cut on or off, or the plant-effluent rate changed for other reasons, the recorder indicated even slight changes in concentration of fluoride.

This fact has made the operation of our fluoridation program more manageable, since we have a continuous record which quickly shows any major change in the fluoride concentration. The variations and interferences discussed are generally slow and gradual and of a magnitude which is relatively unimportant in over-all dosage requirements at our plant, where we have several hours' detention time in the clear-well.

On several occasions, we have picked up feeder irregularities almost immediately. The chief one of these has been the stoppage of

the solution-pot agitator from time to time—sometimes because an operator forgets to turn on the water; once when a piece of paper plugged the valve, and once or twice for reasons which were not determined.

It also helps to readjust the fluoride rate easily, when changes are made in the plant flow rate for short periods of time—say, two to four hours. These changes are usually made to service a pump or perform other maintenance work. Nobody wants to stop and figure precise new settings for all the feeders in the plant at such a time.

During the course of our studies, several attempts were made to discover the cause of the hunting of the pen on the chart. Some of this is expected in a sensitive instrument, but we wished it to be a minimum. Most of the chemical feeders have a cycling action and there can be some cycling of the filter effluents, all of which can be reflected on the fluoride chart. In this phase of the study, a 24-minute clock was placed in the instrument, to stretch out the fluctuations on the chart. We were unable to pick up any definite cycle or to find any single cause for the hunting.

At this point, we asked the Danvers Water Department for permission to install the instrument at their pumping station, where the only treatment of the pond water was fluoridation and chlorination, and they were widely separated, with fluoridation preceding the pumps and chlorination following the pumps. This permission was readily given and full coöperation was granted us during the weeks of the run at their station.

After several weeks of operation, the 24-minute clock was used and four sample charts are shown in Figures 6 to 9, inclusive. Fig. 6 shows a perfectly smooth zero line, which was characteristic at Danvers, followed by a rapid rise to about 1.5 micromhos when the fluoride feeder was turned on. Fig. 7 shows the rise to about 3.0 micromhos when the feed rate was doubled. The fluctuations here became somewhat greater. Fig. 8 shows the return to normal when the feed rate was again reduced.

Fig. 9 shows the return to zero when the feeder was shut off. This chart also shows the value of the recorder in operation. At about the 7 PM mark, the fluoride feeder was turned on and nothing happened. The instrument was in the pumping station, as were the water and

power switches for the feeder, but the feeder was in the gate-house outside, and not visible. Upon checking, it was found that electricity to the feeder was turned on, but not the water to the solution pot.

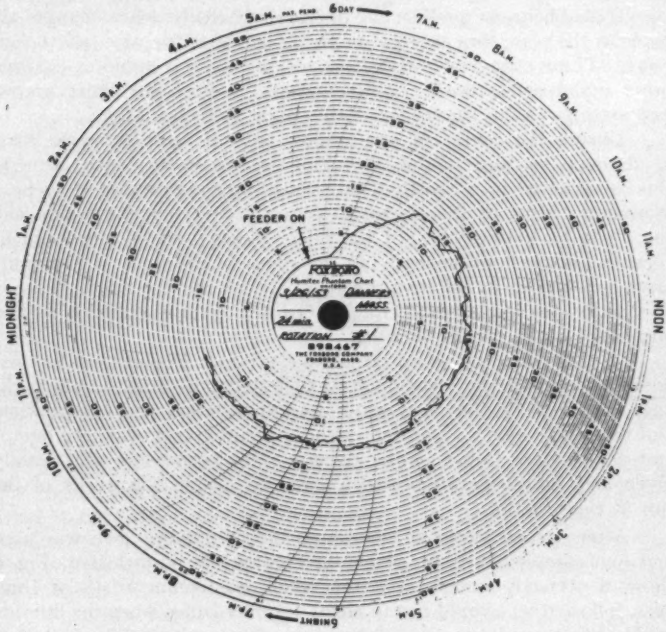



FIG. 6.—FIRST CHART OF A CONTINUOUS SERIES—TEST RUN WITH 24-MINUTE CLOCK. Each hour division on chart equals 1 minute. Calibration in conductivity difference.

When this was turned on, there was a rapid rise in the fluoride concentration, due to the extra material in the solution pot. This gradually leached down to the normal dose at about 1.5 micromhos.

The steady zero and much slower hunting rate at this installation definitely indicated that it is effects from the process at Salem-Beverly

which cause much of the irregularities in the measurement. However, this same sensitivity causes immediate reaction to treatment changes.

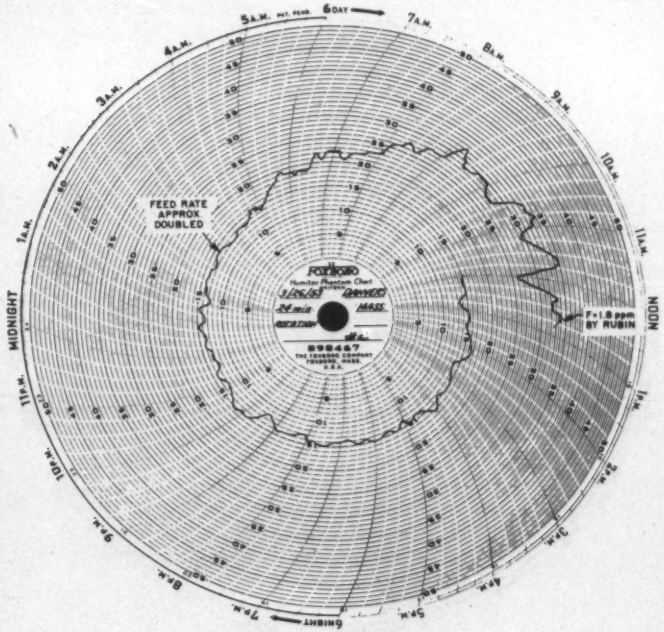



FIG. 7.—SECOND CHART OF A CONTINUOUS SERIES—TEST RUN WITH 24-MINUTE CLOCK. See Fig. 6.

In conclusion, it should be emphasized that this is more of a progress report than a completed one. Considerable information, however, has been gathered during the ten months of operation.

Several advantages are apparent in this method of fluoride-residual recording. There is a constant record of the added fluoride, which to date is not a perfect record, but nonetheless is a record which

very easily shows hour-to-hour, and even minute-to-minute, changes in fluoride concentration. The equipment appears to be reliable, virtually no trouble being had after it was once placed in full operation.

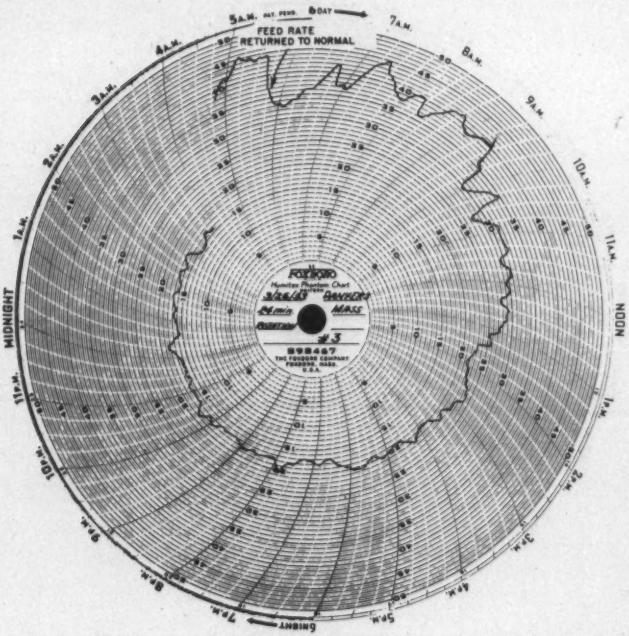



FIG. 8—THIRD CHART OF A CONTINUOUS SERIES—TEST RUN WITH 24-MINUTE CLOCK. See FIG. 6.

We did burn out tubes in the unit early in the work, but this was apparently due to the shaking they got in transit. Replacements were available at the local radio store. We have also blown two fuses in the instrument, apparently due to poor connections in the temporary extension cords used for power. These fuses are special and should be stocked at the plant.

Apparently the instrument is extremely reliable where only fluoridation is in use, as at Danvers, and in our run there, readings from the chart were probably more accurate for fluoride content than the usual chemical analysis would be.

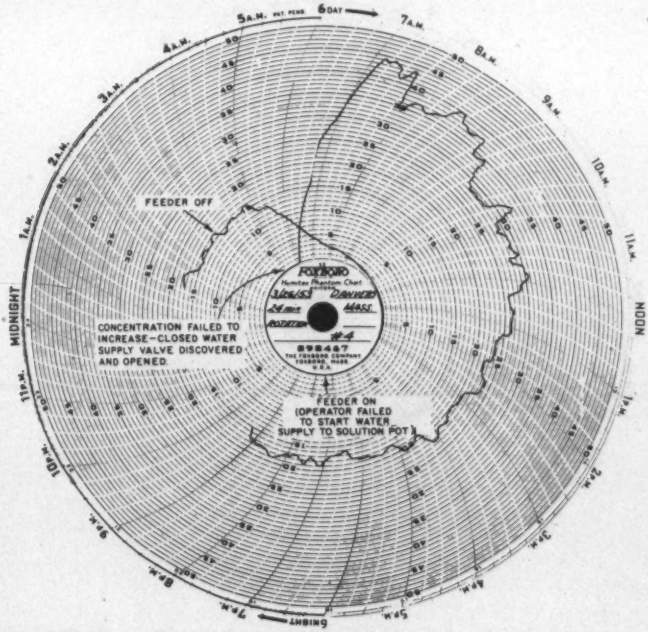



FIG. 9.—FOURTH CHART OF A CONTINUOUS SERIES—TEST RUN WITH 24-MINUTE CLOCK. See Fig. 6.

We hope to track down enough data to make the chart record better than the chemical analysis record at the Salem-Beverly Filter Plant. We are also considering the use of the instrument for actually controlling the fluoride feeder.

Figures 10 and 11 reproduce typical operation charts from Dan-

vers and Salem-Beverly. Figure 12 is a chart from Salem-Beverly, showing the plant-effluent fluoride concentration in micromhos on a day when trouble was being experienced with the water supply to the

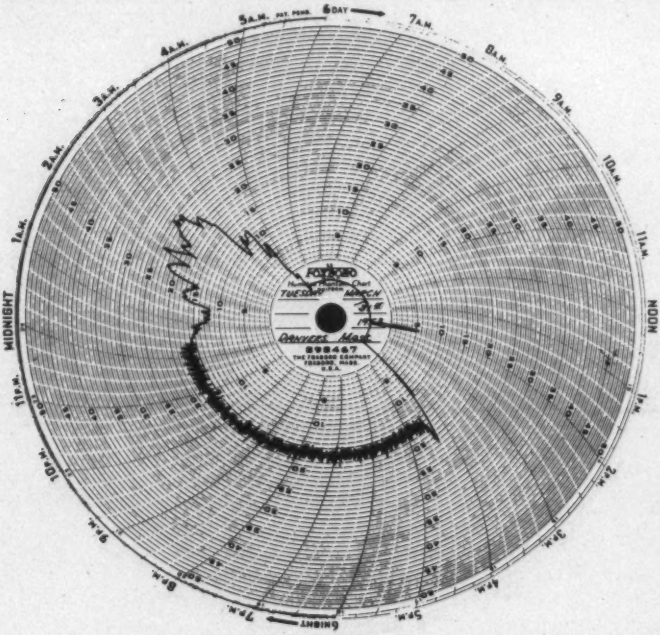



FIG. 10.—FLUORIDE-RESIDUAL RECORD, DANVERS, MASS., MARCH 31, 1953. Only significant period is period of operation from 4 p.m. to midnight. Calibration in conductivity difference.

solution pot. The trouble was eventually eliminated when a loose piece of packing material was found lodged in a valve on the piping system. On the same day there were two occasions when the effluent flow was heavily reduced at the time of washing filters and no adjustment was made in the fluoride feed rate.

This chart indicates a busy day and a sensitive record. It also shows that extensive operation upsets do not have a serious effect upon the overall quantity of fluoride contained in the finished water.

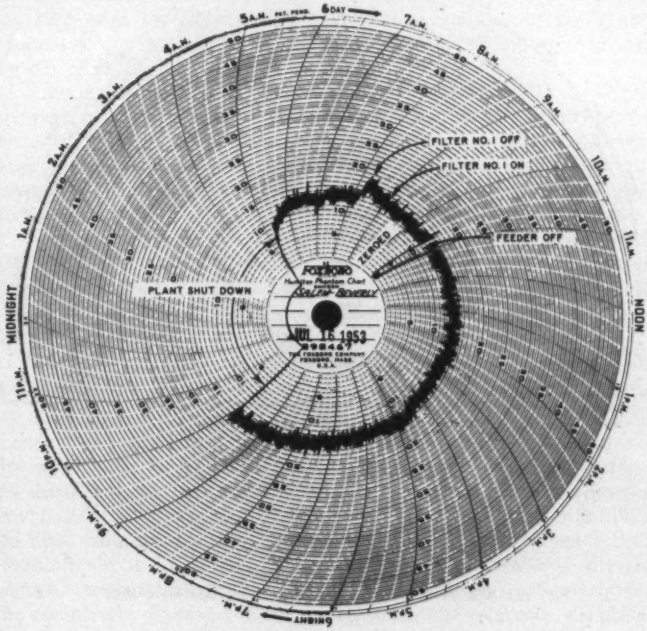



FIG. 11.—FLUORIDE-RESIDUAL RECORD, SALEM-BEVERLY, MASS., JULY 16, 1953. Calibration in conductivity difference.

In this entire day the maximum actual fluoride dose was in the order of 4 ppm for about 15 minutes.

The writer wishes to acknowledge the coöperation and assistance of the members of the Salem and Beverly Water Supply Board, and also of Mr. Russell and Mr. Holzel, Superintendent and Pumping

Station Engineer, respectively, for the Danvers Water Works, for their part in the study.

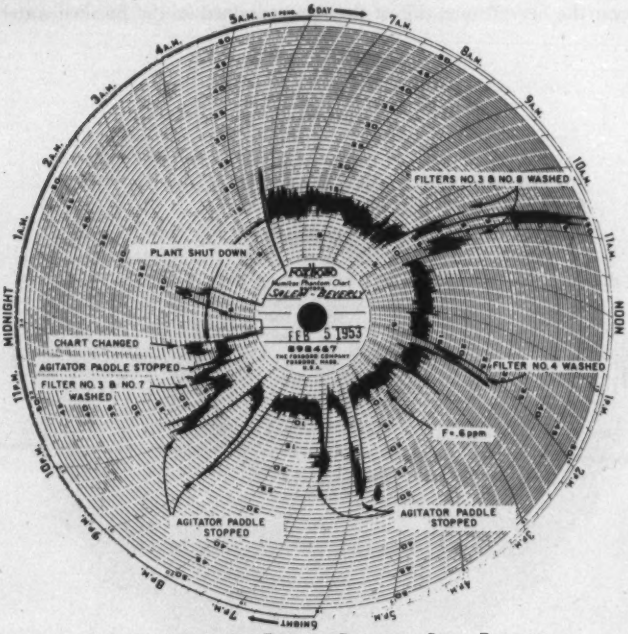



FIG. 12.—NON-TYPICAL FLUORIDE RECORD AT SALEM-BEVERLY.

## DISCUSSION

RUSSELL H. BABCOCK AND JOHN G. DOBSON.*—Mr. Knowlton's excellent paper, outlining the operation results of the first 9 months of operation of this new method of continuous recording of fluoride additions to public water supplies, indicates that the method offers possibilities as a highly sensitive operating guide for the additions of fluorides to public water supplies.

* The Foxboro Co., Foxborough, Mass.

Further work must be done before any assurance can be felt with regard to the method as an accurate measurement of fluoride concentration. However, as an operating guide for the control of fluoridation, it has proved its value.

We wish to emphasize some of the limitations of the general method of conductivity difference which have already been mentioned by Mr. Knowlton.

Since the electrical conductivity of all salts has a substantial temperature coëfficient and since the method is looking at small differences of fairly large base conductivities (in the case of Salem-Beverly approximately 100 to 150 micromhos), any variation in temperature from the point of initial measurement before the addition of fluoride to the final measurement after the addition and mixing of fluorides in the water will introduce substantial errors. In ordinary water-works practice, this limitation probably does not offer any particular problem, but the installation of equipment of this sort should definitely guard against any possibility of changes in excess of a few hundredths of a degree Fahrenheit between the two points of measurement.

Small temperature difference, if constant, is virtually eliminated by the field zeroing of the instrument at the time of the initial setup.

Since the measurement is dependent upon the change of electrical conductivity due to the addition of fluorides, no other material must be either introduced to the water or transferred from an undissolved to dissolved state between the point of the initial reference measurement and the final measurement. Some careful planning of additions of lime, chlorine, phosphate and other additives must be made if this requirement is to be met in operating practice. Probably the most difficult requirement is that the previous additives, particularly lime, be completely dissolved in the water before the reference electrode is reached.

When this method of measurement was first conceived by the senior author of this discussion, preliminary tests were run in the laboratories of The Foxboro Company to determine the probable calibration curves of changes of electrical conductivity with variation of concentration of fluorides. Tests were run on both sodium fluoride and sodium silicofluoride in Foxboro tap water and the calibration curves drawn for those materials. It was found that in the ranges of

concentration of interest for public health work these lines plotting differential conductivity against fluoride concentration were virtually linear.

After the initial installation at the Salem-Beverly Water Supply, small discrepancies were found between the calibration curves that had been established at the Foxboro laboratories and tests on the Salem-Beverly Water Supply.

The discovery of these small discrepancies led to further intensive work on the determination of proper calibration curves of conductivity difference against fluoride concentrations.

Initial preliminary studies indicated that variation of the pH of the raw water might have a substantial effect on the calibration of the measurement and, in order to evaluate this effect, careful studies were made on buffered distilled water, a sodium phosphate, sodium diphosphate buffer system being used. In this series of tests the buffers were maintained at as low values as possible consistent with maintenance of pH and total buffer did not exceed 40 ppm. The region examined varied between pH 6 and pH 8. These tests were run on sodium silicofluoride. In the area of the detailed study between pH 6 and pH 8, no pH effect was observed within the accuracy of the methods used. However, at pH's below 5.5 substantial deviations are to be found due, apparently, to a change in the dissociation of sodium silicofluoride in the acid regions. No investigation has been made at pH's above pH 8.

A similar investigation of a system involving a Foxboro tap water, the phosphate buffer system, and sodium fluoride showed no shifts of calibration with pH even in the acid regions.

Apparently this is true since the dissociation mechanism is virtually fixed down to pH 5. At extremely acid conditions there are changes which are calculable on the basis of dissociation constants. Since hydrofluoric acid is an extremely weak acid, such phenomena are to be expected.

The next step in the investigation involved the determination as to whether mineral content in the water would have any substantial effect on the calibration curve. In order to evaluate this, calibration curves were run on Foxboro tap water and on Salem-Beverly water, and in each case the pH in the samples was observed, in order to per-

mit comparison with the phosphate buffered distilled waters previously run. A comparison of the three calibration curves is shown on Fig. 13.

It will be noted that there is a variation in the calibration, apparently due to the mineral content of the various waters. This variation of calibration with variation of mineral content of the natural waters has not been observed in the case of the addition of sodium fluoride. It is felt that the variation of calibration of the sodium silicofluoride is probably due to natural silica concentrations of the water, although sufficient laboratory work has not yet been done to verify this supposition. In view of this variation in calibration, it is the feeling of these authors that where sodium silicofluoride is used as a source of fluoride for addition to public water supplies, individual calibrations based on actual natural waters will probably be required.

Since sodium silicofluoride contains silica and upon dissociation appears as $SiO_2$, the possibility of interference from Si initially present occurred to us. Investigation reveals that there is a possibility that differences in the calibration curves may be due largely to $SiO_2$ initially present. Because physical and chemical data on the silica ion are virtually nonexistent, efforts to calculate this effect have been unsuccessful. From the data available and the limited work possible, we believe that, with the availability of these basic data, calculation of the silica effects will be possible.

It should be realized that the variation between various waters noted, due to mineral content, is often still within the limits of accuracy of measurement of fluoride concentrations by most of the standard chemical methods. Since the instrument can be easily read to 0.1 ppm, variations in calibration which would not be noticeable in routine plant determination for fluoride concentrations can be determined by this method.

All the laboratory work upon which the above curves are based has been performed at 25° C., because of the convenience of operating at this temperature. The measurement of fluorides by conductivity difference does have a temperature coëfficient which is approximately 2.2% per °C. In actual plant practice this correction can be built into the instrument, either for automatic temperature compensation or for manual temperature compensation, which is probably more applicable in view of the relatively stable temperatures to be found in average public water supplies.

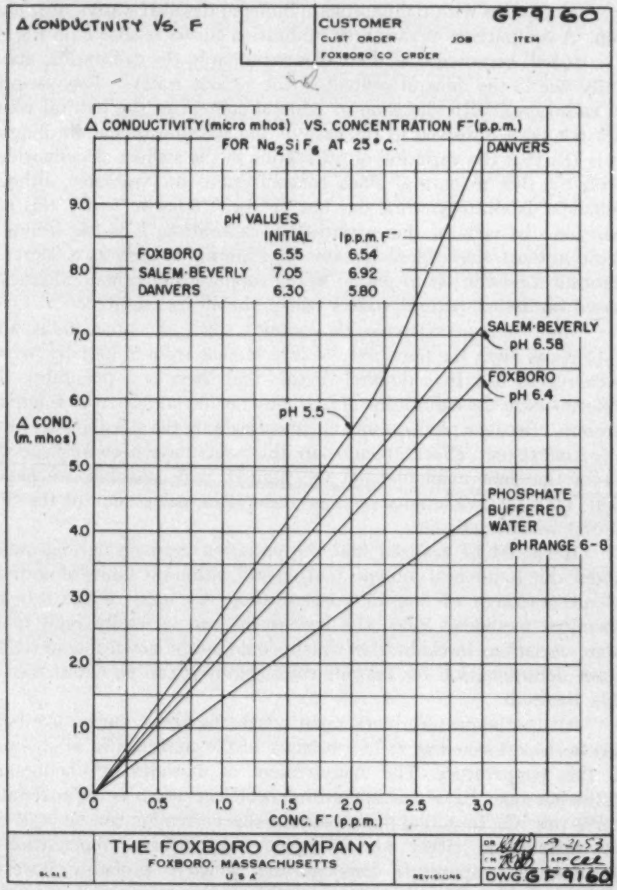

Δ CONDUCTIVITY VS. F
CUSTOMER
CUST ORDER JOB ITEM
FOXBORO CO ORDER
GF9160
Δ CONDUCTIVITY (micro mhos) VS. CONCENTRATION F⁻ (p.p.m.)
FOR $Na_2SiF_6$ AT 25° C.
DANVERS
pH VALUES
INITIAL
1 p.p.m. F⁻
FOXBORO 6.55 6.54
SALEM-BEVERLY 7.05 6.92
DANVERS 6.30 5.80
SALEM-BEVERLY pH 6.58
FOXBORO pH 6.4
pH 5.5
PHOSPHATE BUFFERED WATER pH RANGE 6-8
Δ COND. (m. mhos)
CONC. F⁻ (p.p.m.)
0
0.5
1.0
1.5
2.0
2.5
3.0
1.0
2.0
3.0
4.0
5.0
6.0
7.0
8.0
9.0
THE FOXBORO COMPANY
FOXBORO, MASSACHUSETTS
U.S.A.
REVISIONS
DWG GF9160

FIG. 13.

It should be emphasized that the laboratory techniques for making the calibration curves are such that they cannot be performed routinely in normal, well-equipped water-works laboratories.

In addition to the limitations involved in the installation of this equipment and involved in the basic chemical calibrations as outlined above, there are certain other limitations which are introduced by the electrical circuits involved in the measurement of the conductivity difference. In most cases these errors are of academic interest only to the average user of this type of equipment. However, so that a full understanding of the limitations may be available, we are outlining every known source of interference with this measurement.

The instruments are built for measurement of differential conductivity of a given range, to cover the particular desirable range of fluoride addition for operating at a given base conductivity or conductivity of the finished water before fluoridation. Deviations from these absolute values will cause some potential errors. For instance, of an instrument built for a base conductivity of 100 micromhos, which approximates the initial condition found at Salem-Beverly, and an instrument built for a range of 0-2 ppm fluoride addition of sodium silicofluoride, errors of approximately 1/10 ppm fluoride would be found if the base conductivity varied to a minimum of 75 micromhos or to a maximum of 150 micromhos. At extremely high base conductivities such as may be found in high saline waters, the accuracy of the measurement is not impaired, provided the instrument is calibrated for the particular base conductivity. However if wide variations of the base conductivity are found substantially higher errors than the case outlined above will be found. These errors are readily calculable and the instrument can be built to measure the base conductivity, and therefore correction curves can be applied if desired.

Obviously, if the method is to be satisfactory, particularly on high base-conductivity waters, the cell constant for the two conductivity cells must be identical at all operating temperatures. Present manufacturing methods hold cells to such a degree of accuracy that any errors due to this are of second order.

While we have pointed out a number of limitations and potential sources of error in this method, and while we definitely feel that further field evaluation is indicated before definite conclusions are

reached on this method, we do feel that a satisfactory, highly sensitive and useful tool has been developed, which will be of service to the operating water-works engineer.

The tool which has been used in these experimental installations, mainly highly sensitive conductivity-difference instruments, may well be used for accurate measurement and control of the additions of other treating chemicals, both in the case of fluorides and other chemicals, once the measurement has been firmly established. Control of dry or liquid feeders directly from the instrument is a simple and straightforward engineering step.

We wish to acknowledge the assistance of Professors Edward W. Moore and J. Carrel Morris of Harvard University in explaining the pH effects, and express our thanks to Samir Haddad, Chemist, The Foxboro Co., for his performance of the laboratory work and interpretations of the results.

# REPORT OF COMMITTEE ON RAINFALL AND YIELD OF DRAINAGE AREAS, SEPTEMBER, 1953

## RAINFALL IN NEW ENGLAND

### PART I. RAINFALL IN MASSACHUSETTS

The subject, "Rainfall in New England," is here presented as a continuation of a series of tables published in the JOURNALS of the New England Water Works Association.

The earlier tables of the series were prepared by the late X. H. Goodnough and were published in the JOURNALS as follows: Vol. 29, No. 3, 1915; Vol. 35, No. 3, 1921; Vol. 40, No. 2, 1926; and Vol. 44, No. 2, 1930. Later tables were prepared by George V. White and published in Vol. 56, No. 4, 1942; Vol. 57, No. 1, 1943; and Vol. 57, No. 3, 1943.

Mr. Goodnough's first paper, which was received with much favorable comment, contains not only original tables of the monthly and annual rainfalls and their averages for all known stations through the year 1913, but also some 38 pages of text, a carefully prepared map of lines of equal rainfall, original diagrams showing the 3-year progressive average for the long-term composite record for Eastern Massachusetts and for New Bedford, and diagrams of the average monthly rainfall at various long-term stations in New England.

Mr. Goodnough's second paper includes a continuation of the station records for the period 1914 to 1920, inclusive, and gives monthly and annual averages for the entire period of record. His third paper covers the period from 1921 to 1926, inclusive, and presents many records not shown in the earlier papers, some 82 records having been added since publication of the first paper.

In his fourth and last paper, the monthly and yearly rainfalls, together with their averages for the entire period of record, are given for all stations previously included and for many additional gages. These tables cover 190 pages and show an increase of 216 stations in New England since publication of the first paper.

The following paragraphs, quoted from the introduction of Mr. White's paper, provide certain historical data and indicate the scope of his tables:

"In the present paper, a somewhat different form of presentation was thought necessary, because of the mounting volume of information. The maximum and minimum monthly and yearly rainfalls and their year of occurrence are given for each station prior to 1929. In order to have the complete record of any gage it is necessary to have at hand a copy of Goodnough's last paper (Vol. 44, No. 2, June, 1930). Many complete station records through the year 1930 are to be found also in 'Climatic Summary of the United States,' Sections 84, 85 and 86, published by the United States Weather Bureau. Except for comparatively new stations or an occasional revised record, the period of record in the present paper is 1929 to 1941, inclusive, and monthly and annual averages are given for this period for each station through the year 1938.

"Previous to 1883, the collection of rainfall records was, in many cases, a part of the duties of various governmental agencies, situated at widely separated locations, reporting in general to the U. S. Signal Service. There were also some private and voluntary cooperative stations. With the founding of the New England Meteorological Society of Boston in 1883, many new stations were established in New England, and valuable monthly reports were published. The Society's observers were generally voluntary observers and were left free to use any approved gage at their disposal. There was no standard method of recording. Some observers, for example, measured the snow depth in inches, and their observations were later converted to inches of water in the Society's headquarters by assuming that ten inches of snow equal one inch of water. In March, 1890, the work of the Society was taken over by the New England Weather Service of the U. S. Weather Bureau in the Department of Agriculture, and this body, for several years, maintained the Society's practices of rainfall recording. Gradually the stations, perhaps because of their voluntary nature and because of lack of inspection and interest, reached a low level of efficiency, as the author found when, in 1912, he was assigned to inspect every rainfall station in Massachusetts. A few cooperative stations in each of the other New England States were also visited and

similar conditions were found to obtain there. It was discovered that there were large areas within the State of Massachusetts, including watersheds of great importance to water supplies, that had no rainfall records, and a plan was worked out whereby the State Department of Public Health undertook to place at least one rain gage on the watershed of nearly every stream with a catchment area of 25 square miles or more. Some of these gages have been in operation long enough to cover a period of 28 years and a total of 108 stations in Massachusetts now equal or exceed this length of record. This figure compares with 45 stations that had records of 25 or more years in 1913."

The present paper follows the general scheme of Mr. White's tabulations. However, the extremes data have been omitted, since it was felt that in the case of the longer records there would be but little change from the values previously published, while the extreme values for the shorter records of stations established since 1941 are readily found by inspection of the tables.

In general, records showing less than five complete years of rainfall observations after 1941 have been omitted from this publication.

Records of 193 stations in Massachusetts have been tabulated, together with the average precipitation on the watersheds of certain streams.

Observations at stations under the control of the Division of Sanitary Engineering of the Massachusetts Department of Public Health are made daily at 8:00 A.M. and recorded as of the preceding date. On the other hand, the United States Weather Bureau reports precipitation amounts as of the day of observation, and there are other variations in time of recording and the method of reporting of observations of other agencies. Accordingly, there are certain discrepancies between monthly totals as taken from the several sources of these tables.

It should also be noted that the number of years used in calculating means is not always the same as the number of years in the period of record, because of lacunae in the observations at some gages.

ACUSHNET, MASS.—Elevation, 50 feet
Record: January, 1878, to December, 1950

| Year | Jan. | Feb. | Mar. | Apr. | May | June | July | Aug. | Sept. | Oct. | Nov. | Dec. | Annual |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1942 | 4.84 | 3.85 | 8.62 | 1.03 | 1.66 | 2.23 | 2.29 | 7.75 | 2.86 | 6.26 | 6.34 | 4.72 | 52.45 |
| 1947 | 5.33 | 2.29 | 3.96 | 3.67 | 3.81 | 1.59 | 2.50 | 2.63 | 2.04 | 3.66 | 2.56 | 1.53 | 35.57 |
| 1944 | 3.03 | 2.35 | 5.70 | 4.72 | 0.64 | 2.86 | 0.52 | 1.55 | 5.25 | 2.26 | 9.42 | 4.10 | 42.40 |
| 1945 | 4.49 | 5.57 | 2.62 | 2.59 | 4.26 | 3.96 | 1.77 | 2.60 | 1.41 | 4.40 | 10.78 | 8.99 | 53.44 |
| 1946 | 4.40 | 3.52 | 2.02 | 2.88 | 4.82 | 3.53 | 3.02 | 12.72 | 2.82 | 0.65 | 1.26 | 4.44 | 46.08 |
| 1947 | 3.58 | 1.64 | 3.31 | 6.62 | 3.75 | 4.26 | 3.46 | 1.01 | 2.12 | 2.99 | 4.29 | 4.07 | 41.10 |
| 1948 | 8.04 | 3.74 | 4.57 | 4.62 | 10.45 | 2.96 | 3.45 | 1.65 | 2.65 | 6.98 | 5.26 | 3.11 | 57.48 |
| 1949 | 4.76 | 5.47 | 3.13 | 5.42 | 3.53 | 0.03 | 2.16 | 2.46 | 1.81 | 1.12 | 3.63 | 3.04 | 36.56 |
| 1950 | 4.78 | 5.18 | 4.41 | 3.61 | 3.35 | 2.43 | 0.77 | 2.83 | 1.54 | 1.03 | 6.84 | 4.71 | 41.48 |
| Av. 73 yrs. | 4.36 | 4.00 | 4.57 | 4.06 | 3.70 | 3.23 | 3.13 | 3.90 | 3.44 | 3.96 | 4.27 | 4.32 | 46.94 |

ADAMS, MASS.—Elevation, 750 feet
Record: January, 1926, to December, 1950

| Year | Jan. | Feb. | Mar. | Apr. | May | June | July | Aug. | Sept. | Oct. | Nov. | Dec. | Annual |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1942 | 1.80 | 1.77 | 4.55 | 2.41 | 4.67 | 4.45 | 7.50 | 1.42 | 4.63 | 2.83 | 7.59 | 5.16 | 48.78 |
| 1943 | 2.53 | 1.88 | 2.67 | 4.52 | 7.80 | 3.38 | 8.21 | 5.62 | 0.94 | 4.68 | 6.47 | 0.66 | 49.36 |
| 1944 | 1.37 | 2.35 | 4.19 | 4.83 | 1.71 | 4.70 | 6.78 | 2.19 | 6.68 | 2.23 | 3.47 | 3.43 | 43.93 |
| 1945 | 3.30 | 3.99 | 1.69 | 7.70 | 5.81 | 7.97 | 8.58 | 2.28 | 3.32 | 4.11 | 5.32 | 1.80 | 55.87 |
| 1946 | 2.36 | 3.13 | 2.13 | 2.64 | 5.38 | 4.68 | 4.31 | 3.51 | 6.30 | 3.19 | 2.11 | 3.73 | 43.47 |
| 1947 | 4.28 | 1.93 | 3.88 | 4.89 | 6.39 | 4.36 | 4.08 | 1.84 | 4.52 | 1.62 | 5.46 | 2.40 | 45.65 |
| 1948 | 2.26 | 3.20 | 4.41 | 5.19 | 8.90 | 6.89 | 2.55 | 2.44 | 2.19 | 1.68 | 6.38 | 7.98 | 54.07 |
| 1949 | 6.34 | 2.70 | 2.45 | 4.69 | 4.13 | 2.57 | 3.61 | 2.02 | 3.54 | 2.85 | 1.97 | 2.80 | 39.67 |
| 1950 | 5.29 | 3.14 | 2.46 | 3.50 | 3.97 | 3.35 | 4.26 | 5.16 | 3.31 | 2.07 | 6.21 | 2.47 | 45.19 |
| Av. 25 yrs. | 3.27 | 2.50 | 3.34 | 4.15 | 4.16 | 4.37 | 4.84 | 3.34 | 4.04 | 2.95 | 4.22 | 3.31 | 44.49 |

AGAWAM, MASS. (Provin Mt. Reservoir)—Elevation, 410 feet.
Record: January, 1914, to December, 1950

| Year | Jan. | Feb. | Mar. | Apr. | May | June | July | Aug. | Sept. | Oct. | Nov. | Dec. | Annual |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1942 | 4.16 | 2.33 | 6.75 | 0.78 | 4.42 | 5.19 | 6.45 | 2.73 | 4.55 | 4.80 | 5.70 | 6.65 | 54.51 |
| 1943 | 3.04 | 2.17 | 3.71 | 3.61 | 5.29 | 3.60 | 6.29 | 0.72 | 1.35 | 5.56 | 4.80 | 0.68 | 40.82 |
| 1944 | 1.43 | 2.77 | 5.09 | 5.06 | 0.94 | 5.11 | 2.26 | 1.54 | 6.40 | 1.94 | 5.01 | 3.61 | 41.16 |
| 1945 | 3.96 | 4.70 | 2.78 | 4.39 | 7.44 | 6.41 | 7.00 | 4.42 | 2.41 | 2.34 | 4.92 | 5.82 | 56.59 |
| 1946 | 3.09 | 2.83 | 1.83 | 2.24 | 6.12 | 2.99 | 5.25 | 4.64 | 4.59 | 1.26 | 0.97 | 3.28 | 39.09 |
| 1947 | 3.18 | 3.32 | 3.14 | 4.92 | 4.92 | 2.97 | 3.59 | 3.78 | 4.40 | 3.44 | 6.35 | 3.18 | 47.19 |
| 1948 | 4.33 | 1.98 | 3.92 | 3.29 | 6.33 | 6.21 | 3.54 | 3.81 | 1.42 | 1.27 | 6.46 | 6.25 | 48.81 |
| 1949 | 5.35 | 4.82 | 1.68 | 4.21 | 4.86 | 0.46 | 2.44 | 5.31 | 3.10 | 2.42 | 2.37 | 3.31 | 40.33 |
| 1950 | 5.08 | 4.99 | 3.94 | 3.64 | 4.29 | 3.32 | 2.24 | 4.59 | 1.41 | 2.50 | 5.14 | 5.16 | 46.30 |
| Av. 37 yrs. | 3.70 | 3.46 | 3.74 | 3.65 | 3.92 | 4.21 | 4.30 | 3.79 | 3.71 | 2.99 | 4.02 | 3.71 | 45.20 |

AMHERST, MASS.—Elevation, 254 feet
Record: January, 1836, to December, 1950

| Year | Jan. | Feb. | Mar. | Apr. | May | June | July | Aug. | Sept. | Oct. | Nov. | Dec. | Annual |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1942 | 3.54 | 1.66 | 7.89 | 0.96 | 2.98 | 3.63 | 4.95 | 2.93 | 3.94 | 3.27 | 6.07 | 6.03 | 47.85 |
| 1943 | 2.92 | 1.63 | 3.07 | 3.66 | 5.62 | 2.38 | 6.18 | 2.49 | 2.40 | 3.88 | 4.64 | 0.58 | 39.45 |
| 1944 | 1.24 | 2.34 | 4.36 | 3.66 | 1.35 | 4.70 | 3.88 | 4.33 | 5.31 | 1.74 | 4.21 | 2.18 | 39.30 |
| 1945 | 3.07 | 3.33 | 2.16 | 5.43 | 6.45 | 7.67 | 7.36 | 2.79 | 3.57 | 2.18 | 3.54 | 3.91 | 51.46 |
| 1946 | 2.72 | 3.52 | 1.60 | 2.16 | 5.41 | 3.30 | 5.30 | 4.00 | 4.88 | 1.51 | 0.70 | 3.51 | 38.61 |
| 1947 | 3.37 | 1.96 | 3.29 | 4.59 | 4.63 | 3.22 | 2.73 | 1.69 | 2.84 | 2.04 | 5.63 | 2.33 | 38.32 |
| 1948 | 2.63 | 2.45 | 2.92 | 2.87 | 5.83 | 5.67 | 2.95 | 3.56 | 1.91 | 1.13 | 5.22 | 2.87 | 40.01 |
| 1949 | 4.52 | 2.47 | 1.03 | 2.70 | 4.76 | 0.72 | 3.41 | 3.64 | 3.55 | 2.58 | 1.79 | 2.44 | 33.61 |
| 1950 | 4.33 | 3.99 | 2.67 | 3.64 | 2.77 | 3.65 | 2.83 | 2.93 | 2.24 | 1.87 | 6.60 | 4.64 | 42.16 |
| Av. 115 yrs. | 3.40 | 3.12 | 3.54 | 3.28 | 3.79 | 3.77 | 4.26 | 4.11 | 3.76 | 3.46 | 3.69 | 3.47 | 43.65 |

ASHBURNHAM, MASS.—Elevation, 1,190 feet
Record: September, 1942, to December, 1950

| Year | Jan. | Feb. | Mar. | Apr. | May | June | July | Aug. | Sept. | Oct. | Nov. | Dec. | Annual |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1942 | — | — | — | — | — | — | — | — | 3.14 | 2.87 | 5.65 | 5.18 | — |
| 1943 | 2.64 | 1.57 | 2.58 | 3.49 | 6.77 | 2.26 | 4.31 | 1.99 | 1.00 | 6.94 | 5.35 | 0.76 | 39.66 |
| 1944 | 1.61 | 2.20 | 4.32 | 3.89 | 1.41 | 10.93 | 3.86 | 0.62 | 8.64 | 1.82 | 3.16 | 4.22 | 46.68 |
| 1945 | 3.47 | 4.24 | 1.61 | 4.68 | 5.38 | 6.79 | 4.49 | 2.58 | 1.84 | 2.35 | 4.16 | 4.26 | 45.85 |
| 1946 | 2.99 | 3.25 | 2.06 | 2.65 | 6.82 | 3.85 | 3.96 | 6.84 | 3.14 | 2.86 | 0.94 | 3.80 | 43.16 |
| 1947 | 3.07 | 1.85 | 3.33 | 3.79 | 3.29 | 3.81 | 5.16 | 2.05 | 3.48 | 1.23 | 7.39 | 2.20 | 40.65 |
| 1948 | 2.48 | 2.40 | 3.19 | 2.72 | 6.79 | 4.89 | 4.22 | 1.29 | 0.47 | 2.82 | 6.90 | 2.47 | 40.64 |
| 1949 | 5.10 | 3.32 | 1.85 | 5.37 | 3.84 | 1.53 | 2.93 | 1.37 | 5.20 | 2.22 | 1.97 | 2.66 | 37.36 |
| 1950 | 4.60 | 3.87 | 3.20 | 3.43 | 2.49 | 3.52 | 1.71 | 3.64 | 1.33 | 2.74 | 7.13 | 4.52 | 42.18 |
| Av. 8 yrs. | 3.24 | 2.84 | 2.77 | 3.75 | 4.60 | 4.70 | 3.83 | 2.55 | 3.14 | 2.87 | 4.63 | 3.11 | 42.03 |

ASHBY, MASS. (Watatic Pond)—Elevation, 1,000 feet
Record: January, 1915, to December, 1950

| Year | Jan. | Feb. | Mar. | Apr. | May | June | July | Aug. | Sept. | Oct. | Nov. | Dec. | Annual |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1942 | 3.70 | 1.59 | 7.32 | 1.75 | 3.01 | 6.41 | 6.24 | 2.56 | 3.93 | 3.64 | 5.69 | 5.17 | 51.01 |
| 1943 | 3.66 | 2.54 | 2.70 | 4.58 | 8.17 | 1.62 | 3.02 | 2.76 | 1.68 | 7.37 | 6.25 | 0.77 | 45.12 |
| 1944 | 1.95 | 2.49 | 5.35 | 4.74 | 1.52 | 11.40 | 3.16 | 0.91 | 8.76 | 2.10 | 3.84 | 3.97 | 50.19 |
| 1945 | 3.63 | 4.11 | 1.82 | 5.52 | 5.93 | 7.23 | 4.33 | 2.80 | 2.74 | 2.64 | 5.13 | 4.53 | 50.41 |
| 1946 | 2.97 | 3.46 | 1.97 | 3.50 | 7.74 | 3.62 | 3.54 | 7.60 | 5.50 | 1.22 | 1.13 | 3.90 | 46.15 |
| 1947 | 3.41 | 2.31 | 3.44 | 5.16 | 3.10 | 4.58 | 5.19 | 1.79 | 3.75 | 1.59 | 7.81 | 2.66 | 44.79 |
| 1948 | 3.33 | 2.58 | 3.69 | 3.82 | 7.34 | 5.42 | 3.96 | 1.22 | 0.70 | 2.79 | 6.75 | 2.47 | 44.07 |
| 1949 | 3.12 | 2.49 | 1.64 | 6.81 | 4.20 | 1.42 | 4.41 | 2.89 | 3.69 | 2.60 | 2.22 | 2.85 | 38.34 |
| 1950 | 5.44 | 3.02 | 3.42 | 3.77 | 3.14 | 3.05 | 1.78 | 5.17 | 1.05 | 3.09 | 7.25 | 4.62 | 44.80 |
| Av. 36 yrs. | 3.50 | 2.96 | 3.70 | 4.21 | 4.05 | 4.72 | 4.04 | 3.76 | 4.20 | 3.44 | 4.66 | 3.56 | 46.80 |

ASHLAND, MASS. (Ashland Reservoir)—Elevation, 250 feet
Record: January, 1890, to December, 1950

| Year | Jan. | Feb. | Mar. | Apr. | May | June | July | Aug. | Sept. | Oct. | Nov. | Dec. | Annual |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1942 | 3.48 | 3.85 | 7.43 | 1.60 | 2.46 | 2.86 | 7.60 | 2.43 | 1.71 | 3.32 | 5.04 | 6.89 | 48.67 |
| 1943 | 3.53 | 1.45 | 3.98 | 3.51 | 5.03 | 1.77 | 5.12 | 1.73 | 0.80 | 5.60 | 3.56 | 1.12 | 37.20 |
| 1944 | 1.78 | 2.37 | 4.50 | 4.74 | 1.02 | 4.66 | 2.05 | 2.51 | 7.01 | 2.23 | 6.27 | 3.37 | 42.51 |
| 1945 | 3.17 | 5.24 | 2.23 | 3.00 | 5.07 | 6.60 | 2.19 | 3.81 | 1.51 | 2.21 | 7.11 | 6.43 | 48.57 |
| 1946 | 3.89 | 3.26 | 1.66 | 2.56 | 4.85 | 2.76 | 1.39 | 8.73 | 4.47 | 0.39 | 1.26 | 4.13 | 39.35 |
| 1947 | 2.81 | 2.11 | 3.23 | 4.70 | 4.03 | 3.15 | 4.54 | 1.92 | 3.16 | 1.21 | 5.41 | 4.36 | 40.63 |
| 1948 | 5.71 | 2.16 | 3.33 | 2.78 | 5.92 | 4.98 | 4.54 | 1.19 | 1.09 | 2.87 | 6.31 | 1.88 | 42.76 |
| 1949 | 3.05 | 3.53 | 2.36 | 3.75 | 4.41 | 0.42 | 1.09 | 1.88 | 5.96 | 1.43 | 2.39 | 2.12 | 32.39 |
| 1950 | 4.02 | 4.26 | 3.54 | 3.13 | 1.60 | 1.93 | 2.94 | 6.88 | 1.60 | 2.67 | 6.43 | 3.80 | 42.80 |
| Av. 61 yrs. | 3.83 | 3.74 | 4.09 | 3.65 | 3.26 | 3.37 | 3.54 | 3.56 | 3.69 | 3.15 | 3.72 | 3.75 | 43.35 |

ATHOL, MASS. (Water Works)—Elevation, 850 feet
Record: January, 1912, to December, 1950

| Year | Jan. | Feb. | Mar. | Apr. | May | June | July | Aug. | Sept. | Oct. | Nov. | Dec. | Annual |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1942 | 3.30 | 1.72 | 6.74 | 1.29 | 2.75 | 4.78 | 4.63 | 1.28 | 3.30 | 3.63 | 4.60 | 4.57 | 42.59 |
| 1943 | 2.26 | 1.44 | 2.63 | 3.75 | 6.21 | 2.16 | 5.37 | 2.67 | 2.29 | 5.58 | 6.19 | 0.57 | 41.12 |
| 1944 | 1.40 | 1.98 | 4.29 | 3.57 | 1.32 | 8.95 | 4.23 | 0.54 | 5.85 | 1.81 | 2.97 | 2.68 | 39.59 |
| 1945 | 2.99 | 3.58 | 2.03 | 5.38 | 6.25 | 7.14 | 6.56 | 2.43 | 3.81 | 3.02 | 3.59 | 3.79 | 50.57 |
| 1946 | 2.73 | 3.11 | 1.71 | 2.66 | 6.18 | 3.80 | 4.93 | 5.70 | 3.87 | 1.25 | 0.89 | 3.23 | 40.06 |
| 1947 | 3.38 | 2.12 | 3.02 | 4.25 | 4.21 | 4.07 | 3.26 | 3.67 | 3.62 | 1.09 | 5.28 | 2.42 | 40.39 |
| 1948 | 2.40 | 2.26 | 3.02 | 3.63 | 6.68 | 6.04 | 2.43 | 1.90 | 1.30 | 1.26 | 6.67 | 2.96 | 40.56 |
| 1949 | 4.51 | 3.06 | 1.59 | 4.01 | 4.26 | 1.57 | 3.43 | 2.14 | 3.73 | 2.53 | 2.25 | 3.15 | 36.23 |
| 1950 | 5.00 | 3.53 | 2.60 | 3.31 | 2.64 | 5.10 | 3.08 | 4.41 | 1.45 | 1.99 | 7.51 | 3.92 | 44.54 |
| Av. 39 yrs. | 3.19 | 2.55 | 3.24 | 3.58 | 3.47 | 4.38 | 4.21 | 3.55 | 3.93 | 2.79 | 3.65 | 3.17 | 41.71 |

ATHOL, MASS. (Fryville)—Elevation, 620 feet
Record: July, 1921, to April, 1950

| Year | Jan. | Feb. | Mar. | Apr. | May | June | July | Aug. | Sept. | Oct. | Nov. | Dec. | Annual |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1942 | 3.26 | 1.94 | 6.50 | 1.37 | 3.05 | 4.96 | 4.33 | 1.43 | 3.69 | 3.46 | 3.90 | 4.80 | 42.69 |
| 1943 | 2.00 | 1.37 | 2.52 | 3.34 | 6.06 | 2.12 | 4.61 | 1.76 | 2.62 | 4.79 | 5.87 | 0.59 | 37.65 |
| 1944 | 1.48 | 1.91 | 4.41 | 3.46 | 1.06 | 8.72 | 3.88 | 0.41 | 5.08 | 2.12 | 3.04 | 2.70 | 38.27 |
| 1945 | 3.09 | 3.74 | 2.17 | 5.01 | 5.70 | 5.92 | 6.82 | 2.41 | 3.02 | 3.08 | 3.31 | 3.44 | 47.71 |
| 1946 | 2.29 | 3.35 | 1.26 | 2.20 | 6.15 | 3.96 | 4.46 | 4.26 | 3.81 | 1.18 | 0.61 | 1.42 | 34.95 |
| 1947 | 3.49 | 2.71 | 3.05 | 3.36 | 4.29 | 3.29 | 3.60 | 2.28 | 3.19 | 1.20 | 5.86 | 2.74 | 39.06 |
| 1948 | 2.69 | 2.04 | 2.74 | 3.50 | 7.37 | 6.24 | 2.62 | 1.40 | 1.06 | 1.09 | 5.71 | 1.95 | 38.41 |
| 1949 | 4.53 | 2.38 | 1.27 | 4.03 | 4.00 | 2.00 | 2.96 | 2.50 | 3.13 | 2.67 | 1.50 | 3.16 | 34.13 |
| 1950 | 4.39 | 2.54 | — | 4.34 | Inc. | — | — | — | — | — | — | — | — |
| Av. 28 yrs. | 3.31 | 2.56 | 3.34 | 3.56 | 3.55 | 4.64 | 4.39 | 3.37 | 3.83 | 2.86 | 3.58 | 2.93 | 41.92 |

ATTLEBORO, MASS. (Water Works)—Elevation, 100 feet
Record: January, 1896, to December, 1950

| Year | Jan. | Feb. | Mar. | Apr. | May | June | July | Aug. | Sept. | Oct. | Nov. | Dec. | Annual |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1942 | 3.82 | 3.33 | 7.89 | 0.96 | 2.34 | 3.47 | 4.90 | 4.67 | 1.79 | 3.75 | 4.65 | 5.26 | 46.83 |
| 1943 | 3.06 | 1.50 | 3.26 | 3.68 | 4.07 | 2.16 | 3.04 | 2.23 | 1.26 | 5.70 | 2.71 | 0.98 | 33.65 |
| 1944 | 2.06 | 2.30 | 4.38 | 4.55 | 0.85 | 4.93 | 1.11 | 1.68 | 10.66 | 3.21 | 6.41 | 3.41 | 45.55 |
| 1945 | 3.12 | 4.02 | 2.47 | 2.83 | 4.62 | 5.81 | 2.86 | 3.04 | 3.21 | 2.70 | 8.21 | 6.67 | 49.56 |
| 1946 | 3.63 | 3.47 | 1.84 | 2.71 | 4.58 | 3.43 | 1.45 | 11.66 | 2.19 | 0.34 | 0.95 | 3.49 | 39.74 |
| 1947 | 2.60 | 0.99 | 2.87 | 4.92 | 3.83 | 5.12 | 4.55 | 1.75 | 3.24 | 1.88 | 5.12 | 3.18 | 40.05 |
| 1948 | 5.13 | 1.95 | 3.87 | 3.68 | 9.62 | 4.36 | 4.74 | 6.11 | 2.55 | 4.94 | 5.54 | 1.54 | 51.03 |
| 1949 | 3.67 | 2.73 | 1.45 | 5.24 | 3.67 | 0.10 | 3.13 | 2.27 | 3.28 | 1.83 | 3.69 | 1.87 | 32.93 |
| 1950 | 3.38 | 3.61 | 3.06 | 2.71 | 2.43 | 2.40 | 1.15 | 5.37 | 1.52 | 2.41 | 7.62 | 4.06 | 39.72 |
| Av. 50 yrs. | 3.73 | 3.30 | 3.82 | 3.80 | 3.32 | 3.60 | 3.73 | 3.79 | 3.96 | 2.97 | 3.75 | 3.45 | 43.22 |

BARNSTABLE, MASS. (Hyannis)—Elevation, 31 feet
Record: January, 1892, to December, 1950

| Year | Jan. | Feb. | Mar. | Apr. | May | June | July | Aug. | Sept. | Oct. | Nov. | Dec. | Annual |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1942 | 2.99 | 3.29 | 8.29 | 0.55 | 1.72 | 2.65 | 1.67 | 8.60 | 3.72 | 4.89 | 4.12 | 3.83 | 46.32 |
| 1943 | 4.76 | 2.63 | 3.63 | 3.01 | 4.45 | 1.51 | 5.70 | 4.79 | 3.10 | 4.61 | 2.76 | 1.35 | 42.30 |
| 1944 | 3.29 | 2.26 | 5.44 | 5.35 | 0.65 | 3.47 | 0.53 | 0.43 | 9.27 | 2.56 | 9.27 | 2.94 | 45.46 |
| 1945 | — | — | — | — | — | — | — | — | — | — | — | — | — |
| 1946 | — | — | — | — | — | — | 2.03 | 14.06 | 1.98 | 0.37 | 0.75 | 4.04 | — |
| 1947 | 3.70 | 2.13 | 2.58 | 5.56 | 4.84 | 3.74 | 2.80 | 0.29 | 2.32 | 1.15 | 3.03 | 3.80 | 35.94 |
| 1948 | 6.88 | 3.11 | 4.19 | 4.32 | 8.06 | 2.69 | 1.37 | 0.81 | 1.22 | 7.94 | 5.17 | 2.45 | 48.21 |
| 1949 | 4.08 | 4.35 | 3.54 | 5.06 | 4.30 | 0.00 | 1.85 | 2.56 | 3.40 | 2.09 | 4.14 | 3.51 | 38.88 |
| 1950 | 3.15 | 4.17 | 4.05 | 2.96 | 1.47 | 2.52 | 1.60 | 2.57 | 3.92 | 1.20 | 6.18 | 5.09 | 38.88 |
| Av. 57 yrs. | 4.01 | 3.52 | 4.36 | 3.70 | 3.30 | 3.15 | 2.89 | 3.39 | 3.40 | 3.56 | 3.73 | 3.78 | 42.79 |

BARRE, MASS.—Elevation, 930 feet
Record: August, 1919, to December, 1950

| Year | Jan. | Feb. | Mar. | Apr. | May | June | July | Aug. | Sept. | Oct. | Nov. | Dec. | Annual |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1942 | 3.59 | 2.02 | 5.65 | 0.92 | 3.58 | 7.28 | 6.49 | 1.78 | 3.23 | 3.86 | 3.55 | 4.54 | 46.49 |
| 1943 | 3.44 | 1.40 | 3.73 | 3.91 | 5.55 | 1.63 | 4.76 | 4.30 | 1.20 | 5.64 | 6.28 | 0.62 | 42.46 |
| 1944 | 1.30 | 1.97 | 4.61 | 4.31 | 1.17 | 8.45 | 2.62 | 1.47 | 7.28 | 1.72 | 3.55 | 3.44 | 41.89 |
| 1945 | 2.86 | 3.67 | 1.85 | 5.53 | 5.94 | 6.81 | 8.22 | 4.37 | 1.85 | 3.07 | 3.89 | 4.85 | 52.91 |
| 1946 | 2.89 | 3.68 | 1.98 | 2.91 | 5.60 | 5.51 | 3.56 | 4.06 | 5.79 | 0.92 | 1.72 | 3.56 | 42.18 |
| 1947 | 3.16 | 2.41 | 3.42 | 4.91 | 3.18 | 4.00 | 7.31 | 1.07 | 2.25 | 0.88 | 5.27 | 2.72 | 40.58 |
| 1948 | 3.19 | 2.56 | 4.02 | 3.16 | 7.42 | 6.52 | 4.93 | 1.62 | 1.97 | 1.30 | 6.83 | 2.52 | 46.03 |
| 1949 | 5.53 | 3.44 | 1.43 | 3.14 | 5.22 | 0.64 | 3.00 | 3.30 | 3.25 | 2.84 | 2.22 | 3.65 | 37.66 |
| 1950 | 4.88 | 3.80 | 2.61 | 3.49 | 3.96 | 4.38 | 3.08 | 2.97 | 1.55 | 1.83 | 7.58 | 4.06 | 44.19 |
| Av. 31 yrs. | 3.57 | 2.95 | 3.60 | 3.83 | 3.78 | 4.58 | 4.81 | 3.52 | 4.33 | 3.04 | 4.00 | 3.31 | 45.32 |

BARRE, MASS. (White Valley)—Elevation, 680 feet
Record: January, 1930, to December, 1950

| Year | Jan. | Feb. | Mar. | Apr. | May | June | July | Aug. | Sept. | Oct. | Nov. | Dec. | Annual |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1942 | 3.77 | 2.56 | 5.72 | 1.04 | 4.58 | 4.78 | 5.94 | 2.20 | 3.26 | 3.46 | 4.65 | 5.00 | 46.96 |
| 1943 | 3.13 | 1.48 | 3.32 | 3.95 | 5.14 | 1.55 | 3.80 | 2.46 | 1.08 | 6.00 | 6.21 | 0.57 | 38.69 |
| 1944 | 1.25 | 2.38 | 4.48 | 4.41 | 1.22 | 8.01 | 1.86 | 1.08 | 7.82 | 1.51 | 3.64 | 3.09 | 40.75 |
| 1945 | 3.73 | 3.98 | 2.02 | 5.40 | 5.58 | 6.50 | 4.93 | 3.25 | 1.90 | 2.80 | 4.08 | 4.08 | 48.25 |
| 1946 | 3.25 | 3.40 | 1.90 | 2.44 | 5.37 | 4.97 | 4.29 | 4.68 | 6.54 | 0.99 | 1.24 | 3.07 | 42.14 |
| 1947 | 2.95 | 2.37 | 2.27 | 4.35 | 2.59 | 3.15 | 5.28 | 0.68 | 2.44 | 0.70 | 6.42 | 3.36 | 36.56 |
| 1948 | 4.13 | 2.62 | 3.89 | 3.53 | 6.03 | 6.42 | 7.30 | 2.71 | 1.67 | 1.87 | 7.01 | 2.85 | 50.03 |
| 1949 | 4.11 | 3.40 | 1.99 | 3.12 | 4.40 | 0.78 | 2.64 | 4.35 | 2.98 | 2.34 | 2.26 | 3.63 | 36.00 |
| 1950 | 4.97 | 3.65 | 2.71 | 3.70 | 4.27 | 3.58 | 3.76 | 2.94 | 1.40 | 1.55 | 7.42 | 3.94 | 43.89 |
| Av. 21 yrs. | 3.43 | 2.82 | 3.41 | 3.29 | 3.76 | 4.20 | 4.25 | 3.22 | 4.41 | 2.76 | 3.66 | 3.15 | 42.36 |

BELCHERTOWN, MASS.—Elevation, 550 feet
Record: July, 1939, to December, 1950

| Year | Jan. | Feb. | Mar. | Apr. | May | June | July | Aug. | Sept. | Oct. | Nov. | Dec. | Annual |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1939 | — | — | — | — | — | — | 2.90 | 3.81 | 2.83 | 5.19 | 1.02 | 4.15 | — |
| 1940 | 1.91 | 2.08 | 4.45 | 6.23 | 4.84 | 1.80 | 3.96 | 2.06 | 2.34 | 1.52 | 6.98 | 2.31 | 40.48 |
| 1941 | 1.91 | 1.57 | 1.30 | 0.87 | 2.67 | 3.40 | 6.65 | 4.07 | 1.21 | 2.55 | 3.56 | 2.90 | 32.66 |
| 1942 | 3.50 | 1.33 | 5.08 | 1.29 | 3.34 | 4.71 | 4.98 | 1.72 | 4.29 | 4.37 | 7.32 | 5.62 | 47.55 |
| 1943 | 2.79 | 1.61 | 3.34 | 3.11 | 6.21 | 3.12 | 7.03 | 3.90 | 1.44 | 4.19 | 6.49 | 0.76 | 43.99 |
| 1944 | 1.05 | 1.88 | 4.28 | 4.81 | 1.40 | 7.92 | 1.72 | 1.58 | 7.08 | 2.53 | 5.12 | 3.03 | 42.40 |
| 1945 | 2.58 | 3.49 | 1.88 | 5.25 | 6.30 | 6.81 | 7.89 | 3.14 | 1.74 | 2.35 | 4.12 | 5.16 | 50.71 |
| 1946 | 3.28 | 3.66 | 1.68 | 2.16 | 5.75 | 4.59 | 4.50 | 4.70 | 3.24 | 0.81 | 1.03 | 3.03 | 38.43 |
| 1947 | 3.17 | 2.79 | 2.86 | 5.35 | 2.77 | 3.06 | 5.09 | 1.79 | 2.14 | 2.05 | 5.35 | 3.00 | 39.42 |
| 1948 | 3.47 | 2.48 | 3.87 | 3.38 | 4.84 | 7.45 | 4.23 | 2.83 | 2.20 | 1.22 | 6.58 | 2.70 | 45.25 |
| 1949 | 5.15 | 3.11 | 1.47 | 2.57 | 5.39 | 1.10 | 4.44 | 3.25 | 2.32 | 2.55 | 2.20 | 3.85 | 37.40 |
| 1950 | 4.42 | 4.10 | 2.76 | 3.80 | 3.01 | 4.57 | 2.97 | 3.08 | 1.29 | 1.95 | 5.52 | 3.83 | 41.30 |
| Av. 11 yrs. | 3.02 | 2.55 | 3.00 | 3.53 | 4.23 | 4.41 | 4.86 | 2.92 | 2.66 | 2.37 | 4.93 | 3.29 | 41.77 |

BERLIN, MASS. (Hudson Water Works)—Elevation, 450 feet
Record: December, 1927, to December, 1950

| Year | Jan. | Feb. | Mar. | Apr. | May | June | July | Aug. | Sept. | Oct. | Nov. | Dec. | Annual |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1942 | 3.42 | 2.86 | 6.96 | 1.48 | 2.84 | 4.62 | 6.57 | 2.51 | 2.14 | 2.73 | 4.88 | 5.80 | 46.81 |
| 1943 | 2.71 | 1.16 | 3.58 | 3.04 | 4.75 | 3.14 | 4.46 | 1.81 | 0.84 | 5.77 | 4.75 | 0.78 | 36.79 |
| 1944 | 1.52 | 1.91 | 4.08 | 3.96 | 0.81 | 6.13 | 0.71 | 1.45 | 5.62 | 2.34 | 5.25 | 3.39 | 37.17 |
| 1945 | 2.81 | 3.47 | 2.25 | 3.56 | 5.11 | 6.36 | 3.32 | 3.96 | 1.66 | 1.83 | 5.50 | 5.22 | 45.05 |
| 1946 | 3.52 | 2.86 | 1.60 | 2.71 | 6.23 | 4.22 | 2.66 | 7.16 | 5.06 | 0.75 | 1.14 | 3.57 | 41.48 |
| 1947 | 2.72 | 1.88 | 3.40 | 4.86 | 3.61 | 3.39 | 5.27 | 2.21 | 2.94 | 1.06 | 4.49 | 2.61 | 38.44 |
| 1948 | 3.18 | 2.05 | 2.80 | 2.99 | 6.57 | 5.23 | 5.67 | 2.88 | 0.67 | 2.50 | 6.34 | 1.57 | 42.45 |
| 1949 | 3.64 | 2.83 | 1.51 | 4.46 | 3.44 | 0.53 | 1.60 | 3.05 | 2.02 | 1.85 | 2.46 | 1.91 | 29.30 |
| 1950 | 4.06 | 3.53 | 3.24 | 3.18 | 1.68 | 1.85 | 2.85 | 4.19 | 1.70 | 2.64 | 5.21 | 3.66 | 37.79 |
| Av. 23 yrs. | 3.37 | 2.58 | 3.61 | 3.60 | 3.45 | 4.01 | 3.23 | 3.62 | 3.96 | 2.81 | 3.67 | 3.01 | 40.92 |

BEVERLY, MASS. (Wenham Lake)—Elevation, 60 feet
Record: January, 1874, to December, 1950

| Year | Jan. | Feb. | Mar. | Apr. | May | June | July | Aug. | Sept. | Oct. | Nov. | Dec. | Annual |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1942 | 3.93 | 4.74 | 5.80 | 1.27 | 2.31 | 3.79 | 3.80 | 3.29 | 2.18 | 4.20 | 4.44 | 4.43 | 44.18 |
| 1943 | 3.53 | 1.19 | 3.55 | 2.65 | 5.08 | 1.66 | 4.46 | 1.84 | 1.44 | 4.44 | 3.29 | 0.82 | 33.95 |
| 1944 | 2.37 | 2.21 | 3.38 | 3.39 | 0.60 | 4.84 | 1.87 | 2.00 | 5.93 | 1.82 | 5.62 | 3.36 | 37.39 |
| 1945 | 2.58 | 3.49 | 1.70 | 2.72 | 4.67 | 6.92 | 3.21 | 2.70 | 1.41 | 2.30 | 7.05 | 5.59 | 44.34 |
| 1946 | 4.16 | 3.14 | 1.50 | 2.89 | 4.89 | 2.76 | 1.22 | 7.96 | 2.28 | 0.80 | 1.49 | 4.17 | 37.26 |
| 1947 | 2.63 | 1.12 | 3.06 | 4.20 | 3.54 | 2.02 | 4.14 | 2.14 | 2.67 | 0.55 | 5.62 | 3.18 | 34.87 |
| 1948 | 4.36 | 2.22 | 2.54 | 2.76 | 5.22 | 4.99 | 4.55 | 1.37 | 0.63 | 3.64 | 3.52 | 1.49 | 39.29 |
| 1949 | 3.90 | 3.17 | 1.63 | 3.81 | 3.12 | 0.94 | 1.56 | 4.08 | 4.09 | 2.18 | 3.39 | 1.87 | 33.74 |
| 1950 | 4.32 | 3.10 | 3.08 | 1.87 | 1.81 | 1.32 | 2.29 | 4.15 | 0.96 | 2.29 | 7.33 | 4.05 | 36.57 |
| Av. 77 yrs. | 3.46 | 3.06 | 3.53 | 3.45 | 3.34 | 3.53 | 3.63 | 3.60 | 3.48 | 3.34 | 3.89 | 3.34 | 41.65 |

BLANDFORD, MASS.—Elevation, 1,400 feet
Record: January, 1930, to December, 1950

| Year | Jan. | Feb. | Mar. | Apr. | May | June | July | Aug. | Sept. | Oct. | Nov. | Dec. | Annual |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1942 | 3.63 | 2.32 | 6.84 | 1.33 | 5.24 | 5.39 | 5.77 | 2.97 | 5.32 | 4.37 | 6.18 | 6.40 | 55.76 |
| 1943 | 2.71 | 1.75 | 3.37 | 2.98 | 6.04 | 4.03 | 6.33 | 1.65 | 2.59 | 5.81 | 5.07 | 0.77 | 43.10 |
| 1944 | 1.59 | 2.38 | 4.66 | 3.93 | 1.13 | 5.18 | 2.05 | 3.51 | 7.35 | 1.99 | 5.30 | 3.81 | 42.88 |
| 1945 | 3.97 | 4.13 | 1.80 | 4.95 | 8.03 | 6.82 | 7.48 | 3.94 | 6.18 | 2.68 | 3.71 | 3.88 | 57.57 |
| 1946 | 2.33 | 2.84 | 1.23 | 2.15 | 6.24 | 3.10 | 4.43 | 3.87 | 4.62 | 1.46 | 0.88 | 2.92 | 36.07 |
| 1947 | 3.24 | 2.65 | 4.41 | 4.93 | 4.60 | 3.29 | 4.55 | 4.54 | 3.36 | 3.84 | 5.26 | 2.30 | 46.97 |
| 1948 | 2.86 | 2.74 | 3.32 | 3.17 | 4.53 | 7.66 | 4.53 | 2.73 | 2.92 | 1.86 | 4.81 | 11.58 | 52.71 |
| 1949 | 5.13 | 3.15 | 1.58 | 4.27 | 4.06 | 0.71 | 3.85 | 3.14 | 3.68 | 2.17 | 1.69 | 3.24 | 36.67 |
| 1950 | 4.51 | 4.33 | 3.53 | 2.83 | 4.19 | 4.07 | 2.11 | 3.58 | 1.21 | 2.64 | 3.88 | 5.08 | 46.96 |
| Av. 21 yrs. | 3.51 | 2.78 | 3.94 | 3.28 | 4.40 | 4.64 | 4.05 | 3.73 | 4.60 | 3.18 | 4.06 | 3.64 | 45.81 |

BOSTON, MASS. (Chestnut Hill Reservoir)—Elevation, 124 feet
Record: January, 1873, to December, 1950

| Year | Jan. | Feb. | Mar. | Apr. | May | June | July | Aug. | Sept. | Oct. | Nov. | Dec. | Annual |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1942 | 3.64 | 3.65 | 6.98 | 1.58 | 2.09 | 3.87 | 5.10 | 2.35 | 2.21 | 3.23 | 5.10 | 4.83 | 44.63 |
| 1943 | 3.43 | 1.41 | 4.08 | 3.50 | 5.16 | 2.39 | 3.56 | 1.29 | 2.23 | 5.18 | 2.98 | 1.37 | 36.58 |
| 1944 | 1.77 | 2.69 | 4.38 | 3.77 | 0.43 | 4.62 | 2.62 | 1.90 | 6.20 | 3.33 | 6.47 | 3.28 | 41.46 |
| 1945 | 4.25 | 3.93 | 2.24 | 2.66 | 5.15 | 7.96 | 2.39 | 3.14 | 1.21 | 3.25 | 6.76 | 6.27 | 49.21 |
| 1946 | 3.66 | 3.52 | 1.71 | 2.64 | 5.51 | 3.14 | 2.98 | 9.65 | 2.53 | 0.39 | 1.22 | 3.90 | 40.85 |
| 1947 | 2.61 | 1.17 | 3.06 | 4.75 | 4.51 | 2.84 | 5.85 | 1.79 | 4.32 | 1.48 | 6.05 | 3.38 | 41.81 |
| 1948 | 5.76 | 2.49 | 3.44 | 2.68 | 5.54 | 4.19 | 5.48 | 1.48 | 1.05 | 3.43 | 5.28 | 1.36 | 42.18 |
| 1949 | 3.19 | 8.00 | 1.35 | 4.69 | 3.39 | 1.62 | 1.23 | 5.75 | 4.59 | 1.57 | 3.27 | 2.25 | 40.90 |
| 1950 | 3.73 | 3.82 | 3.75 | 3.20 | 1.99 | 1.48 | 2.19 | 3.00 | 1.36 | 2.08 | 7.20 | 3.31 | 37.11 |
| Av. 78 yrs. | 3.99 | 3.88 | 3.98 | 3.81 | 3.31 | 3.44 | 3.50 | 3.82 | 3.46 | 3.46 | 3.94 | 3.60 | 44.19 |

BOSTON, MASS. (Arnold Arboretum)—Elevation, 75 feet
Record: August, 1934, to August, 1946

| Year | Jan. | Feb. | Mar. | Apr. | May | June | July | Aug. | Sept. | Oct. | Nov. | Dec. | Annual |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1942 | 4.21 | 3.36 | 7.70 | 1.63 | 1.97 | 3.11 | 5.30 | 2.30 | 2.64 | 3.39 | 5.05 | 4.94 | 45.60 |
| 1943 | 3.52 | 1.42 | 4.17 | 3.03 | 5.32 | 2.38 | 3.12 | 1.25 | 2.00 | 5.74 | 2.60 | 1.28 | 35.83 |
| 1944 | 1.96 | 2.54 | 4.20 | 3.96 | 0.34 | 4.01 | 2.10 | 2.33 | 7.46 | 3.45 | 6.58 | 3.39 | 42.32 |
| 1945 | 3.45 | 4.35 | 2.21 | 2.69 | 5.44 | 7.15 | 3.01 | 3.50 | 2.17 | 2.66 | 8.78 | 6.90 | 52.31 |
| 1946 | 4.36 | 3.65 | 1.79 | 2.77 | 5.67 | 3.51 | 2.84 | 10.53 | — | — | — | — | — |
| Av. 11 yrs. | 4.13 | 3.03 | 4.03 | 3.78 | 2.94 | 4.32 | 3.43 | 3.22 | 3.57 | 3.06 | 4.47 | 3.84 | 43.82 |

BOSTON, MASS. (Brookline Pumping Station, West Roxbury)—Elevation, 90 feet
Record: October, 1913, to December, 1950

| Year | Jan. | Feb. | Mar. | Apr. | May | June | July | Aug. | Sept. | Oct. | Nov. | Dec. | Annual |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1942 | 3.53 | 2.98 | 5.65 | 1.37 | 2.08 | 2.37 | 5.33 | 2.27 | 2.34 | 3.13 | 4.73 | 4.86 | 40.64 |
| 1943 | 3.03 | 1.04 | 3.27 | 3.11 | 5.23 | 2.11 | 3.89 | 1.20 | 1.88 | 4.48 | 2.64 | 1.18 | 33.06 |
| 1944 | 1.69 | 2.26 | 3.65 | 4.05 | 0.39 | 4.77 | 2.15 | 2.97 | 6.92 | 2.98 | 6.57 | 3.17 | 41.57 |
| 1945 | 3.34 | 4.32 | 1.98 | 2.41 | 5.26 | 6.18 | 2.31 | 2.95 | 2.01 | 2.67 | 8.71 | 6.55 | 48.69 |
| 1946 | 3.53 | 3.04 | 1.20 | 2.37 | 4.86 | 2.83 | 2.03 | 8.94 | 2.40 | 0.33 | 1.20 | 3.05 | 35.78 |
| 1947 | 2.08 | 1.23 | 3.03 | 3.40 | 3.95 | 3.76 | 5.72 | 2.67 | 4.60 | 1.52 | 5.10 | 4.22 | 41.28 |
| 1948 | 5.41 | 1.45 | 2.66 | 2.50 | 5.55 | 4.27 | 5.20 | 1.41 | 1.56 | 3.90 | 5.29 | 1.47 | 40.67 |
| 1949 | 2.82 | 3.14 | 1.28 | 4.04 | 3.26 | 0.89 | 1.73 | 6.01 | 4.09 | 1.44 | 3.43 | 1.92 | 34.05 |
| 1950 | 3.60 | 3.21 | 3.23 | 2.50 | 1.56 | 1.44 | 1.43 | 3.33 | 1.10 | 1.73 | 6.15 | 3.05 | 32.33 |
| Av. 37 yrs. | 3.50 | 3.08 | 3.41 | 3.72 | 3.10 | 3.70 | 3.54 | 3.91 | 3.57 | 2.83 | 3.65 | 3.35 | 41.36 |

BOSTON, MASS. (U.S. Weather Bureau)—Elevation, 27 feet
Record: January, 1871, to December, 1950

| Year | Jan. | Feb. | Mar. | Apr. | May | June | July | Aug. | Sept. | Oct. | Nov. | Dec. | Annual |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1942 | 3.69 | 3.45 | 7.00 | 1.60 | 2.11 | 4.24 | 4.14 | 2.09 | 1.96 | 2.78 | 4.69 | 4.72 | 42.47 |
| 1943 | 3.74 | 1.23 | 4.02 | 2.64 | 4.56 | 1.49 | 3.91 | 1.28 | 1.41 | 4.32 | 2.16 | 0.99 | 32.25 |
| 1944 | 2.03 | 2.15 | 3.92 | 3.52 | 0.25 | 5.35 | 1.61 | 1.79 | 5.36 | 2.58 | 5.68 | 2.33 | 37.07 |
| 1945 | 3.67 | 4.09 | 1.90 | 2.02 | 4.47 | 6.44 | 2.12 | 4.27 | 1.81 | 2.23 | 6.86 | 7.42 | 47.30 |
| 1946 | 4.18 | 3.00 | 1.50 | 2.62 | 4.91 | 2.76 | 2.22 | 9.92 | 2.04 | 0.34 | 0.98 | 3.60 | 38.07 |
| 1947 | 2.45 | 1.44 | 2.30 | 4.15 | 4.36 | 2.88 | 3.98 | 2.19 | 3.95 | 1.13 | 5.13 | 3.95 | 37.91 |
| 1948 | 5.11 | 2.08 | 3.14 | 2.62 | 5.37 | 4.50 | 4.53 | 1.24 | 0.67 | 4.84 | 5.16 | 1.25 | 40.51 |
| 1949 | 3.21 | 3.25 | 1.66 | 3.23 | 2.53 | 0.93 | 1.10 | 2.12 | 6.47 | 1.60 | 3.71 | 1.64 | 31.45 |
| 1950 | 3.86 | 3.81 | 2.99 | 2.38 | 1.55 | 1.10 | 1.45 | 3.14 | 0.89 | 1.99 | 6.17 | 3.37 | 32.70 |
| Av. 80 yrs. | 3.57 | 3.23 | 3.71 | 3.48 | 3.15 | 3.16 | 3.28 | 3.58 | 3.13 | 3.20 | 3.68 | 3.34 | 40.51 |

BOYLSTON, MASS.—Elevation, 530 feet
Record: January, 1896, to December, 1950

| Year | Jan. | Feb. | Mar. | Apr. | May | June | July | Aug. | Sept. | Oct. | Nov. | Dec. | Annual |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1942 | 4.59 | 2.57 | 7.54 | 1.69 | 2.36 | 6.21 | 6.53 | 2.56 | 2.49 | 2.72 | 5.84 | 5.96 | 51.06 |
| 1943 | 3.72 | 1.61 | 3.91 | 3.69 | 5.18 | 2.29 | 5.18 | 1.50 | 0.90 | 6.46 | 5.19 | 0.75 | 40.38 |
| 1944 | 1.45 | 2.59 | 4.74 | 4.18 | 1.01 | 6.01 | 0.75 | 1.56 | 5.39 | 2.00 | 5.04 | 3.46 | 38.18 |
| 1945 | 4.35 | 4.45 | 2.89 | 3.61 | 5.13 | 6.06 | 4.55 | 4.02 | 2.32 | 1.96 | 5.85 | 5.56 | 50.75 |
| 1946 | 3.74 | 3.47 | 1.56 | 3.06 | 6.70 | 3.35 | 3.21 | 7.94 | 4.12 | 0.86 | 1.45 | 3.87 | 43.33 |
| 1947 | 2.95 | 2.49 | 3.40 | 4.32 | 4.81 | 3.68 | 5.08 | 3.31 | 3.42 | 1.21 | 4.49 | 3.34 | 42.50 |
| 1948 | 4.26 | 3.02 | 3.47 | 3.15 | 7.43 | 6.04 | 5.85 | 2.01 | 0.71 | 3.41 | 7.17 | 2.55 | 49.07 |
| 1949 | 4.03 | 3.62 | 1.90 | 4.00 | 3.85 | 0.51 | 1.25 | 3.18 | 1.81 | 1.83 | 2.72 | 2.62 | 30.32 |
| 1950 | 4.37 | 5.07 | 3.91 | 3.88 | 2.10 | 2.41 | 1.53 | 4.00 | 1.39 | 2.95 | 5.57 | 4.08 | 41.26 |
| Av. 55 yrs. | 3.85 | 3.72 | 4.09 | 3.79 | 3.43 | 3.90 | 3.88 | 3.77 | 3.88 | 3.04 | 3.97 | 3.80 | 45.12 |

BRAINTREE, MASS.—Elevation, 100 feet
Record: October, 1941, to December, 1950

| Year | Jan. | Feb. | Mar. | Apr. | May | June | July | Aug. | Sept. | Oct. | Nov. | Dec. | Annual |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1941 | — | — | — | — | — | — | — | — | — | 1.70 | 2.90 | 3.37 | — |
| 1942 | 4.03 | 3.06 | 8.11 | 1.66 | 2.42 | 3.30 | 6.51 | 2.31 | 2.81 | 3.38 | 6.19 | 4.65 | 48.43 |
| 1943 | 4.23 | 1.78 | 3.61 | 3.62 | 5.24 | 2.24 | 3.14 | 1.16 | 2.55 | 5.38 | 3.57 | 1.29 | 37.81 |
| 1944 | 1.89 | 2.54 | 4.87 | 4.07 | 0.32 | 5.75 | 3.44 | 0.91 | 9.32 | 3.70 | 7.17 | 3.33 | 47.31 |
| 1945 | 4.44 | 4.93 | 2.59 | 2.54 | 5.81 | 6.14 | 3.40 | 5.06 | 1.44 | 2.87 | 10.48 | 7.73 | 57.43 |
| 1946 | 3.79 | 3.28 | 1.50 | 2.99 | 4.90 | 3.98 | 0.92 | 14.13 | 2.71 | 0.24 | 1.07 | 4.05 | 43.56 |
| 1947 | 2.62 | 1.44 | 3.19 | 4.98 | 5.09 | 5.20 | 3.68 | 3.17 | 5.34 | 2.33 | 5.27 | 4.58 | 46.89 |
| 1948 | 6.27 | 2.23 | 3.21 | 3.11 | 6.08 | 5.33 | 6.55 | 1.70 | 1.20 | 6.41 | 6.61 | 1.50 | 50.20 |
| 1949 | 3.60 | 3.55 | 1.50 | 4.20 | 3.65 | 0.40 | 1.81 | 2.35 | 3.42 | 1.93 | 3.76 | 1.93 | 32.10 |
| 1950 | 3.52 | 3.77 | 2.98 | 3.49 | 2.02 | 1.98 | 2.99 | 5.41 | 1.55 | 2.19 | 7.72 | 3.89 | 41.51 |
| Av. 9 yrs. | 3.82 | 2.95 | 3.51 | 3.41 | 3.95 | 3.81 | 3.60 | 4.02 | 3.37 | 3.16 | 5.76 | 3.66 | 45.02 |

BRIDGEWATER, MASS. (State Farm)—Elevation, 60 feet
Record: June, 1914, to December, 1950

| Year | Jan. | Feb. | Mar. | Apr. | May | June | July | Aug. | Sept. | Oct. | Nov. | Dec. | Annual |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1942 | 3.25 | 2.65 | 7.74 | 0.99 | 1.30 | 3.48 | 4.82 | 3.87 | 1.82 | 3.93 | 4.53 | 4.00 | 42.38 |
| 1943 | 2.09 | 1.70 | 3.06 | 3.50 | 5.16 | 1.82 | 3.32 | 2.75 | 1.67 | 4.01 | 2.97 | 1.18 | 33.23 |
| 1944 | 2.39 | 2.47 | 4.71 | 3.91 | 0.53 | 3.64 | 0.95 | 1.05 | 7.79 | 2.50 | 7.36 | 3.20 | 40.50 |
| 1945 | 4.46 | 4.57 | 2.17 | 2.37 | 4.99 | 5.17 | 2.46 | 2.27 | 1.27 | 3.69 | 9.98 | 8.05 | 51.45 |
| 1946 | 3.72 | 2.82 | 1.70 | 2.38 | 4.12 | 4.06 | 1.15 | 12.03 | 2.73 | 0.27 | 1.25 | 3.54 | 39.77 |
| 1947 | 2.57 | 1.54 | 1.83 | 5.92 | 4.11 | 4.81 | 4.60 | 1.43 | 2.66 | 2.36 | 4.24 | 3.79 | 39.86 |
| 1948 | 6.31 | 2.12 | 3.88 | 3.46 | 8.81 | 3.18 | 4.32 | 3.93 | 1.20 | 5.88 | 5.07 | 2.54 | 50.70 |
| 1949 | 3.78 | 3.39 | 1.27 | 3.78 | 3.32 | 0.04 | 1.61 | 1.97 | 3.50 | 1.38 | 3.11 | 1.99 | 29.14 |
| 1950 | 3.62 | 4.07 | 3.51 | 2.79 | 2.13 | 2.57 | 0.93 | 3.25 | 1.96 | 1.33 | 6.28 | 3.84 | 36.28 |
| Av. 36 yrs. | 3.80 | 2.98 | 3.64 | 3.79 | 3.14 | 3.49 | 3.55 | 3.88 | 3.64 | 3.01 | 3.72 | 3.58 | 42.22 |

BROCKTON, MASS. (City Hall)*—Elevation, 200 feet
Record: January, 1894, to December, 1950

| Year | Jan. | Feb. | Mar. | Apr. | May | June | July | Aug. | Sept. | Oct. | Nov. | Dec. | Annual |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1942 | 3.46 | 3.18 | 7.09 | 1.24 | 1.22 | 3.07 | 4.05 | 2.28 | 1.68 | 2.74 | 4.27 | 3.44 | 37.72 |
| 1943 | 2.56 | 1.32 | 2.48 | 2.93 | 4.25 | 2.13 | 2.15 | 2.74 | 0.92 | 2.81 | 2.67 | 0.93 | 27.89 |
| 1944 | 1.46 | 1.79 | 4.09 | 3.34 | 0.17 | 4.68 | 0.80 | 0.71 | 7.89 | 2.11 | 6.29 | 2.31 | 35.64 |
| 1945 | 2.87 | 3.31 | 1.91 | 2.05 | 4.09 | 4.41 | 2.27 | 2.31 | 1.86 | 2.55 | 7.84 | 6.08 | 41.55 |
| 1946 | 3.56 | 2.79 | 1.93 | 2.17 | 3.66 | 4.06 | 0.71 | 8.84 | 2.46 | 0.25 | 0.83 | 3.57 | 34.83 |
| 1947 | 2.59 | 1.11 | 1.92 | 3.58 | 4.02 | 4.34 | 3.46 | 1.49 | 6.72 | 1.79 | 4.55 | 2.96 | 38.53 |
| 1948 | 5.21 | 1.90 | 4.24 | 3.17 | 7.45 | 3.77 | 6.31 | 2.97 | 0.31 | 5.58 | 5.47 | 1.40 | 47.78 |
| 1949 | 3.10 | 3.25 | 2.11 | 3.47 | 3.87 | 0.07 | 0.40 | 1.27 | 3.24 | 1.32 | 2.78 | 2.24 | 27.12 |
| 1950 | 3.54 | 3.29 | 2.94 | 2.71 | 1.27 | 1.83 | 2.78 | 6.76 | 5.77 | 1.88 | 7.33 | 2.85 | 42.95 |
| Av. 57 yrs. | 3.28 | 2.98 | 3.43 | 3.40 | 2.97 | 3.10 | 3.29 | 3.38 | 3.51 | 3.04 | 3.42 | 3.25 | 39.05 |

*Recording gage on roof.

BROCKTON, MASS. (Sewage Disposal Works)—Elevation, 100 feet
Record: December, 1919, to December, 1950

| Year | Jan. | Feb. | Mar. | Apr. | May | June | July | Aug. | Sept. | Oct. | Nov. | Dec. | Annual |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1942 | 3.57 | 3.09 | 8.03 | 1.33 | 1.81 | 3.14 | 6.15 | 3.28 | 2.03 | 3.25 | 5.02 | 4.52 | 45.22 |
| 1943 | 3.93 | 1.71 | 3.21 | 3.79 | 4.64 | 2.76 | 2.43 | 3.72 | 1.70 | 3.58 | 3.38 | 1.08 | 35.93 |
| 1944 | 2.16 | 1.99 | 4.98 | 4.07 | 0.38 | 5.32 | 0.90 | 1.16 | 8.55 | 2.75 | 7.45 | 3.14 | 42.85 |
| 1945 | 3.64 | 4.39 | 2.39 | 2.32 | 4.44 | 5.67 | 2.78 | 2.75 | 2.28 | 3.23 | 10.27 | 7.30 | 51.46 |
| 1946 | 3.90 | 3.57 | 2.21 | 2.64 | 4.18 | 3.96 | 0.94 | 10.29 | 2.20 | 0.28 | 1.04 | 3.93 | 39.14 |
| 1947 | 3.00 | 1.08 | 2.93 | 4.97 | 3.97 | 5.20 | 3.68 | 2.08 | 6.20 | 2.25 | 5.66 | 4.20 | 45.22 |
| 1948 | 6.45 | 1.82 | 4.18 | 3.66 | 9.31 | 3.91 | 7.28 | 2.66 | 1.27 | 6.99 | 5.75 | 1.72 | 55.00 |
| 1949 | 3.75 | 3.86 | 1.91 | 3.60 | 4.27 | 0.12 | 0.79 | 2.33 | 2.84 | 1.68 | 3.33 | 2.11 | 30.59 |
| 1950 | 3.12 | 2.90 | 2.38 | 3.13 | 1.69 | 2.57 | 2.05 | 8.06 | 3.52 | 1.89 | 6.86 | 4.44 | 42.61 |
| Av. 31 yrs. | 3.71 | 3.03 | 3.87 | 3.78 | 3.31 | 3.84 | 3.36 | 4.19 | 3.52 | 3.14 | 4.10 | 3.59 | 43.44 |

CAMBRIDGE, MASS. (Harvard University)
Record: March, 1940, to December, 1950

| Year | Jan. | Feb. | Mar. | Apr. | May | June | July | Aug. | Sept. | Oct. | Nov. | Dec. | Annual |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1940 | — | — | 3.11 | 4.80 | 3.45 | 2.60 | 2.75 | 1.16 | 2.59 | 0.81 | — | — | — |
| 1941 | 3.38 | 1.66 | 2.26 | 1.57 | 2.46 | 3.12 | — | 1.58 | 1.25 | 1.90 | 2.78 | 3.08 | — |
| 1942 | 3.80 | 3.53 | 6.85 | 1.17 | 1.99 | 3.96 | 3.76 | 2.03 | 2.00 | 3.15 | 5.17 | — | — |
| 1943 | — | 1.09 | — | 2.85 | 4.45 | 1.34 | 3.36 | 1.12 | 1.53 | 6.77 | 2.51 | 1.15 | — |
| 1944 | 2.31 | 1.83 | 3.79 | 3.53 | 0.46 | 4.19 | 1.56 | 2.19 | 6.34 | 2.72 | 6.02 | 2.60 | 37.54 |
| 1945 | 3.54 | 4.06 | 1.78 | 2.30 | 4.78 | 6.00 | 2.39 | 3.27 | 1.15 | 2.50 | 7.63 | 6.40 | 45.80 |
| 1946 | 3.79 | 3.05 | 1.16 | 2.17 | 4.03 | 2.40 | 2.50 | 10.47 | 2.62 | 0.40 | 1.24 | 4.20 | 38.03 |
| 1947 | 2.47 | 0.86 | 2.81 | 3.43 | 4.10 | 2.58 | 5.80 | 1.93 | 4.78 | 1.09 | 6.27 | 3.90 | 40.02 |
| 1948 | 4.80 | 2.06 | 3.08 | 2.57 | 5.37 | 4.84 | 5.10 | 1.39 | 0.74 | 3.90 | 5.63 | 1.45 | 40.93 |
| 1949 | 3.30 | 3.09 | 1.65 | 4.97 | 3.77 | 0.54 | 1.19 | 1.42 | 8.91 | 1.53 | 3.10 | 1.75 | 35.22 |
| 1950 | 3.70 | 3.49 | 3.28 | 2.64 | 1.69 | 1.04 | 1.10 | 3.30 | 1.40 | 2.42 | 6.57 | 3.26 | 33.89 |
| Av. 7 yrs. | 3.42 | 2.63 | 2.51 | 3.09 | 3.46 | 3.08 | 2.80 | 3.42 | 3.70 | 2.08 | 5.21 | 3.36 | 38.76 |

CHARLES RIVER WATERSHED, MASS. (Above Brookline Pumping Station)
Record: October, 1918, to December, 1950

| Year | Jan. | Feb. | Mar. | Apr. | May | June | July | Aug. | Sept. | Oct. | Nov. | Dec. | Annual |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1942 | 4.12 | 2.89 | 7.10 | 1.16 | 2.21 | 2.98 | 5.63 | 2.78 | 2.07 | 3.59 | 5.02 | 5.61 | 45.16 |
| 1943 | 3.18 | 1.28 | 3.56 | 3.67 | 5.11 | 2.23 | 4.78 | 1.29 | 1.17 | 5.61 | 3.01 | 1.16 | 36.05 |
| 1944 | 1.67 | 2.24 | 4.41 | 4.20 | 0.33 | 4.70 | 1.61 | 2.26 | 7.78 | 3.02 | 6.72 | 3.27 | 42.71 |
| 1945 | 3.07 | 4.13 | 1.93 | 2.87 | 5.24 | 6.52 | 3.05 | 3.98 | 1.74 | 2.59 | 8.09 | 6.72 | 49.93 |
| 1946 | 3.74 | 3.26 | 1.67 | 2.49 | 5.36 | 3.68 | 1.40 | 9.61 | 2.75 | 0.52 | 1.15 | 3.69 | 39.32 |
| 1947 | 2.47 | 1.42 | 3.09 | 4.53 | 4.33 | 4.10 | 5.08 | 2.32 | 4.40 | 1.44 | 5.86 | 3.93 | 42.97 |
| 1948 | 5.54 | 1.82 | 3.17 | 2.98 | 5.81 | 4.17 | 5.93 | 1.81 | 1.18 | 3.92 | 5.97 | 1.83 | 44.13 |
| 1949 | 3.44 | 3.34 | 1.56 | 4.08 | 3.75 | 0.42 | 1.28 | 5.54 | 3.53 | 1.60 | 3.06 | 1.82 | 33.42 |
| 1950 | 3.75 | 3.91 | 3.29 | 3.30 | 2.04 | 2.11 | 2.82 | 4.17 | 1.75 | 2.24 | 6.48 | 3.57 | 39.43 |
| Av. 37 yrs. | 3.56 | 3.05 | 3.55 | 3.68 | 3.18 | 3.71 | 3.70 | 3.97 | 3.47 | 2.87 | 3.77 | 3.40 | 41.91 |

CHARLTON, MASS. (Charlton Depot)—Elevation, 990 feet
Record: July, 1920, to December, 1950

| Year | Jan. | Feb. | Mar. | Apr. | May | June | July | Aug. | Sept. | Oct. | Nov. | Dec. | Annual |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1942 | 4.16 | 2.33 | 8.00 | 1.33 | 2.80 | 4.42 | 5.29 | 3.60 | 2.41 | 4.03 | 5.17 | 4.80 | 48.34 |
| 1943 | 2.65 | 1.61 | 3.95 | 3.66 | 5.78 | 2.37 | 4.97 | 1.12 | 0.93 | 5.67 | 5.01 | 1.29 | 39.01 |
| 1944 | 1.29 | 2.72 | 4.72 | 4.30 | 1.47 | 6.09 | 1.78 | 1.31 | 6.33 | 1.54 | 5.57 | 3.84 | 40.96 |
| 1945 | 3.30 | 6.63 | 2.42 | 4.69 | 4.71 | 6.79 | 3.29 | 3.94 | 1.37 | 2.66 | 6.18 | 5.12 | 51.10 |
| 1946 | 3.18 | 4.22 | 1.58 | 2.16 | 4.52 | 4.19 | 3.19 | 6.62 | 5.75 | 0.73 | 1.34 | 3.16 | 40.64 |
| 1947 | 2.84 | 2.63 | 3.12 | 5.54 | 3.10 | 3.48 | 5.31 | 3.15 | 3.40 | 1.03 | 4.87 | 3.16 | 41.63 |
| 1948 | 3.08 | 2.30 | 5.26 | 3.73 | 6.99 | 8.01 | 5.74 | 2.37 | 0.84 | 2.67 | 5.23 | 2.58 | 48.80 |
| 1949 | 3.55 | 2.71 | 1.77 | 3.43 | 3.35 | 0.64 | 2.27 | 4.71 | 2.23 | 2.17 | 2.32 | 2.80 | 31.95 |
| 1950 | 4.85 | 3.04 | 3.07 | 4.39 | 2.76 | 3.35 | 3.48 | 5.28 | 2.11 | 2.22 | 5.50 | 3.91 | 43.96 |
| Av. 30 yrs. | 3.22 | 3.08 | 3.76 | 3.61 | 3.46 | 4.07 | 3.94 | 3.81 | 3.68 | 3.02 | 3.81 | 3.00 | 42.46 |

CHESTER, MASS.—Elevation, 600 feet
Record: January, 1913, to December, 1950

| Year | Jan. | Feb. | Mar. | Apr. | May | June | July | Aug. | Sept. | Oct. | Nov. | Dec. | Annual |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1942 | 3.35 | 2.02 | 7.67 | 1.38 | 4.53 | 4.32 | 6.33 | 1.96 | 4.74 | 4.51 | 6.53 | 6.19 | 53.53 |
| 1943 | 3.10 | 1.69 | 3.84 | 3.82 | 6.70 | 3.52 | 6.12 | 2.73 | 2.14 | 6.49 | 6.01 | 0.76 | 46.92 |
| 1944 | 1.68 | 2.43 | 5.04 | 3.89 | 1.15 | 4.81 | 4.69 | 1.46 | 4.54 | 2.26 | 6.57 | 3.63 | 42.15 |
| 1945 | 4.18 | 4.46 | 2.17 | 6.13 | 7.77 | 6.37 | 8.44 | 4.22 | 4.22 | 2.34 | 4.10 | 4.25 | 58.65 |
| 1946 | 2.79 | 3.89 | 1.19 | 2.25 | 6.09 | 4.03 | 4.55 | 1.98 | 5.19 | 1.80 | 1.00 | 3.71 | 38.47 |
| 1947 | 3.68 | 2.53 | 4.64 | 5.15 | 3.19 | 3.63 | 6.12 | 2.55 | 2.03 | 3.78 | 5.82 | 2.63 | 45.75 |
| 1948 | 2.93 | 2.81 | 3.83 | 3.02 | 6.10 | 8.39 | 1.87 | 3.70 | 2.19 | 1.41 | 4.28 | 11.64 | 52.17 |
| 1949 | 5.08 | 4.77 | 1.29 | 3.98 | 3.55 | 1.07 | 3.49 | 2.43 | 3.09 | 2.21 | 1.98 | 2.82 | 35.76 |
| 1950 | 5.34 | 4.39 | 3.29 | 3.11 | 4.68 | 3.02 | 2.24 | 2.72 | 1.34 | 2.49 | 9.72 | 4.77 | 47.11 |
| Av. 38 yrs. | 3.53 | 3.14 | 3.63 | 3.68 | 4.01 | 4.25 | 4.07 | 3.73 | 3.88 | 3.26 | 4.22 | 3.53 | 44.93 |

CHESTERFIELD, MASS.—Elevation, 1,410 feet
Record: October, 1919, to December, 1950

| Year | Jan. | Feb. | Mar. | Apr. | May | June | July | Aug. | Sept. | Oct. | Nov. | Dec. | Annual |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1942 | 3.00 | 1.87 | 6.43 | 1.53 | 5.18 | 4.05 | 6.12 | 3.33 | 5.10 | 4.57 | 5.20 | 5.51 | 51.89 |
| 1943 | 2.74 | 1.39 | 3.43 | 3.52 | 6.21 | 3.05 | 6.29 | 1.62 | 2.09 | 7.12 | 6.69 | 0.57 | 44.72 |
| 1944 | 1.51 | 2.37 | 4.53 | 4.31 | 1.54 | 6.33 | 3.41 | 1.70 | 6.04 | 1.94 | 5.78 | 4.15 | 43.61 |
| 1945 | 3.55 | 3.98 | 2.42 | 6.10 | 8.45 | 8.53 | 6.75 | 4.44 | 3.07 | 2.58 | 4.32 | 3.64 | 57.83 |
| 1946 | 2.33 | 3.50 | 1.15 | 2.14 | 6.39 | 4.82 | 5.07 | 2.46 | 6.51 | 1.65 | 1.23 | 3.48 | 40.73 |
| 1947 | 3.48 | 2.12 | 4.03 | 3.07 | 4.12 | 3.77 | 4.18 | 4.26 | 3.46 | 2.78 | 5.64 | 2.82 | 43.73 |
| 1948 | 2.44 | 2.95 | 2.99 | 3.18 | 7.26 | 7.53 | 2.97 | 3.51 | 2.17 | 2.02 | 4.07 | 10.01 | 51.10 |
| 1949 | 5.22 | 3.45 | 1.43 | 4.62 | 4.65 | 1.94 | 4.46 | 3.16 | 3.49 | 3.11 | 1.92 | 2.45 | 39.90 |
| 1950 | 5.32 | 4.95 | 3.56 | 3.82 | 5.25 | 3.12 | 3.14 | 2.69 | 1.71 | 2.59 | 7.59 | 4.96 | 48.70 |
| Av. 31 yrs. | 3.32 | 2.96 | 3.68 | 3.84 | 4.39 | 4.84 | 4.28 | 3.86 | 4.59 | 3.43 | 4.41 | 3.46 | 47.06 |

CHICOPEE, MASS. (Westover Field)—Elevation, 242 feet
Record: February, 1942, to December, 1950

| Year | Jan. | Feb. | Mar. | Apr. | May | June | July | Aug. | Sept. | Oct. | Nov. | Dec. | Annual |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1942 | — | 2.11 | 4.58 | 0.50 | 4.71 | 3.94 | 4.74 | 1.22 | 4.09 | 3.40 | 7.33 | 5.92 | Inc. |
| 1943 | 2.61 | 1.38 | 3.52 | 4.90 | 6.16 | 3.25 | 5.73 | 1.09 | 1.13 | 3.81 | 5.35 | 0.67 | 39.60 |
| 1944 | 1.25 | 2.52 | 3.72 | 4.57 | 1.21 | 4.80 | 2.32 | 3.23 | 7.24 | 2.09 | 5.44 | 2.40 | 40.79 |
| 1945 | 3.27 | 3.81 | 2.25 | 6.21 | 7.57 | 6.01 | 6.88 | 3.63 | 2.10 | 2.30 | 4.06 | 5.44 | 53.53 |
| 1946 | 3.38 | 3.77 | 1.28 | 2.74 | 5.20 | 5.67 | 4.84 | 3.92 | 3.19 | 1.46 | 0.79 | 2.59 | 38.83 |
| 1947 | 2.70 | 3.47 | 2.55 | 5.45 | 4.10 | 2.38 | 3.31 | 2.06 | 2.54 | 2.32 | 5.39 | 3.00 | 39.27 |
| 1948 | 4.38 | 1.47 | 2.50 | 2.93 | 5.40 | 7.07 | 4.31 | 3.23 | 1.18 | 1.14 | 6.43 | 2.99 | 43.03 |
| 1949 | 7.11 | 3.46 | 2.20 | 2.58 | 5.56 | 0.33 | 3.27 | 5.26 | *2.60 | 4.06 | 3.20 | 4.78 | *44.41 |
| 1950 | 6.12 | 5.05 | 2.12 | 3.86 | 4.25 | 5.52 | 2.19 | 5.22 | 2.45 | 1.54 | 7.11 | 5.39 | 50.82 |
| Av. 8 yrs. | 3.85 | 3.12 | 2.52 | 4.16 | 4.93 | 4.38 | 4.11 | 3.46 | 2.80 | 2.34 | 4.72 | 3.41 | 43.80 |

*Estimated.

CHICOPEE, MASS. (Water Works Treatment Plant)—Elevation, 140 feet
Record: January, 1935, to December, 1950

| Year | Jan. | Feb. | Mar. | Apr. | May | June | July | Aug. | Sept. | Oct. | Nov. | Dec. | Annual |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1935 | 5.16 | 2.58 | 1.86 | 2.28 | 2.31 | 5.69 | 4.43 | 0.74 | 4.29 | 0.72 | 4.54 | 1.34 | 35.94 |
| 1936 | 6.30 | 3.00 | 7.00 | 4.73 | 3.50 | 5.45 | 3.50 | 2.84 | 3.49 | 3.59 | 1.47 | 6.12 | 50.99 |
| 1937 | 5.21 | 1.78 | 3.75 | 4.01 | 5.11 | 5.27 | 3.20 | 4.83 | 4.29 | 4.65 | 6.46 | 2.63 | 51.19 |
| 1938 | 5.52 | 2.14 | 2.50 | 2.92 | 3.46 | 7.89 | 9.33 | 2.57 | 12.43 | 2.74 | 3.31 | 3.91 | 58.72 |
| 1939 | 2.76 | 4.10 | 4.20 | 4.56 | 1.12 | 3.44 | 1.31 | 4.94 | 3.43 | 5.25 | 1.13 | 3.43 | 39.67 |
| 1940 | 3.06 | 2.85 | 5.62 | 6.32 | 6.45 | 2.79 | 3.36 | 1.17 | 2.25 | 1.60 | 6.61 | 2.52 | 44.60 |
| 1941 | 2.53 | 1.65 | 2.15 | 0.82 | 2.14 | 3.68 | 4.65 | 2.45 | 1.43 | 2.01 | 3.91 | 4.19 | 31.61 |
| 1942 | 4.25 | 1.61 | 7.20 | 0.57 | 3.92 | 3.80 | 5.43 | 2.22 | 5.08 | 4.50 | 5.48 | 6.47 | 50.53 |
| 1943 | 3.12 | 1.38 | 3.79 | 3.26 | 5.82 | 3.32 | 6.18 | 1.01 | 1.13 | 4.32 | 5.19 | 0.63 | 39.15 |
| 1944 | 1.69 | 2.16 | 4.65 | 4.76 | 1.45 | 4.35 | 2.37 | 3.62 | 7.56 | 1.95 | 5.21 | 2.96 | 42.73 |
| 1945 | 3.19 | 3.54 | 2.14 | 6.21 | 7.43 | 6.74 | 6.58 | 4.34 | 2.25 | 2.50 | 4.23 | 5.38 | 54.53 |
| 1946 | 2.88 | 2.83 | 1.79 | 2.11 | 6.03 | 3.17 | 3.97 | 4.57 | 3.99 | 1.29 | 1.03 | 3.21 | 36.87 |
| 1947 | 2.97 | 2.76 | 2.66 | 5.32 | 4.16 | 3.44 | 4.37 | 2.68 | 4.12 | 2.95 | 5.06 | 2.64 | 43.13 |
| 1948 | 2.95 | 2.06 | 3.45 | 3.01 | 6.15 | 6.93 | 4.08 | 2.85 | 1.79 | 0.85 | 6.36 | 3.41 | 43.89 |
| 1949 | 5.03 | 3.58 | 1.81 | 3.54 | 4.91 | 0.42 | 3.41 | 7.54 | 2.59 | 2.29 | 1.92 | 3.25 | 40.29 |
| 1950 | 4.48 | 3.88 | 3.28 | 3.45 | 3.84 | 3.24 | 2.29 | 3.72 | 1.32 | 1.48 | 4.63 | 4.53 | 40.14 |
| Av. 16 yrs. | 3.82 | 2.62 | 3.62 | 3.62 | 4.24 | 4.35 | 4.28 | 3.26 | 3.84 | 2.67 | 4.16 | 3.54 | 44.02 |

CLINTON, MASS. (Metropolitan Water Works)—Elevation, 370 feet
Record: January, 1902, to December, 1950

| Year | Jan. | Feb. | Mar. | Apr. | May | June | July | Aug. | Sept. | Oct. | Nov. | Dec. | Annual |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1942 | 4.30 | 3.16 | 7.53 | 1.40 | 2.45 | 5.57 | 6.40 | 2.09 | 2.46 | 2.65 | 5.21 | 6.00 | 49.22 |
| 1943 | 3.86 | 1.49 | 4.22 | 3.63 | 5.08 | 2.19 | 4.48 | 1.76 | 0.85 | 6.37 | 5.08 | 0.71 | 39.72 |
| 1944 | 1.84 | 2.36 | 4.93 | 4.13 | 0.93 | 7.22 | 0.88 | 3.51 | 5.64 | 2.32 | 5.63 | 3.84 | 43.23 |
| 1945 | 4.89 | 4.41 | 2.73 | 4.14 | 4.73 | 5.53 | 4.60 | 5.43 | 1.73 | 1.92 | 6.35 | 5.91 | 52.37 |
| 1946 | 3.52 | 3.53 | 1.84 | 2.96 | 6.89 | 3.04 | 2.85 | 7.23 | 4.73 | 0.96 | 1.23 | 3.81 | 42.59 |
| 1947 | 3.22 | 2.64 | 3.43 | 4.26 | 5.17 | 3.81 | 4.50 | 6.24 | 3.82 | 1.32 | 5.14 | 3.71 | 47.26 |
| 1948 | 4.06 | 2.58 | 3.62 | 3.19 | 7.24 | 5.68 | 5.20 | 1.72 | 0.55 | 3.47 | 7.62 | 1.84 | 46.77 |
| 1949 | 3.80 | 3.75 | 2.37 | 5.03 | 3.60 | 0.49 | 1.22 | 1.31 | 3.72 | 2.03 | 2.54 | 2.50 | 32.36 |
| 1950 | 4.78 | 4.29 | 3.60 | 3.32 | 1.84 | 2.01 | 2.67 | 2.60 | 1.72 | 2.67 | 4.67 | 3.65 | 37.82 |
| Av. 49 yrs. | 3.92 | 3.62 | 4.13 | 3.83 | 3.42 | 4.03 | 3.75 | 3.68 | 3.80 | 3.10 | 3.91 | 3.82 | 45.01 |

COHASSET, MASS. (Beechwood)—Elevation, 40 feet
Record: June, 1935, to December, 1950

| Year | Jan. | Feb. | Mar. | Apr. | May | June | July | Aug. | Sept. | Oct. | Nov. | Dec. | Annual |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1942 | 3.68 | 3.14 | 8.09 | 1.26 | 1.91 | 4.24 | 5.00 | 2.54 | 2.71 | 4.20 | 7.74 | 4.46 | 48.97 |
| 1943 | 3.03 | 1.61 | 3.22 | 3.42 | 6.12 | 2.22 | 3.96 | 1.55 | 2.89 | 4.20 | 3.79 | 1.42 | 37.43 |
| 1944 | 2.59 | 1.99 | 4.60 | 4.01 | 0.30 | 4.28 | 1.28 | 0.65 | 8.75 | 4.18 | 7.49 | 3.80 | 43.92 |
| 1945 | 3.90 | 3.81 | 2.37 | 2.61 | 5.72 | 5.73 | 2.93 | 5.78 | 2.70 | 4.07 | 10.00 | 10.88 | 60.50 |
| 1946 | 4.42 | 3.40 | 1.47 | 2.97 | 5.04 | 4.37 | 1.47 | 11.27 | 2.89 | 0.42 | 1.08 | 4.71 | 43.51 |
| 1947 | 3.07 | 0.96 | 3.06 | 4.67 | 4.57 | 5.87 | 5.30 | 2.54 | 5.68 | 3.31 | 5.94 | 4.27 | 49.24 |
| 1948 | 6.11 | 1.98 | 2.94 | 2.65 | 7.22 | 4.65 | 7.17 | 2.88 | 1.23 | 6.88 | 6.61 | 1.80 | 52.12 |
| 1949 | 3.88 | 3.72 | 1.62 | 3.50 | 4.16 | 0.41 | 3.19 | 2.25 | 4.06 | 1.61 | 4.12 | 2.00 | 34.52 |
| 1950 | 4.08 | 3.39 | 3.27 | 3.75 | 1.70 | 2.54 | 1.84 | 8.42 | 2.00 | 1.81 | 7.16 | 3.58 | 43.54 |
| Av. 15 yrs. | 3.80 | 2.68 | 3.54 | 3.63 | 3.75 | 3.98 | 3.42 | 4.16 | 4.18 | 3.40 | 5.05 | 4.19 | 45.78 |

COLRAIN, MASS.—Elevation, 500 feet
Record: January, 1913, to December, 1950

| Year | Jan. | Feb. | Mar. | Apr. | May | June | July | Aug. | Sept. | Oct. | Nov. | Dec. | Annual |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1942 | 3.25 | 2.44 | 6.63 | 1.33 | 5.52 | 2.36 | 7.25 | 1.93 | 5.22 | 5.08 | 5.06 | 5.94 | 52.01 |
| 1943 | 2.66 | 1.40 | 3.16 | 4.52 | 6.89 | 2.83 | 6.47 | 3.37 | 1.94 | 6.98 | 5.91 | 0.57 | 46.70 |
| 1944 | 1.68 | 2.21 | 5.36 | 4.47 | 1.48 | 6.85 | 3.96 | 2.27 | 6.65 | 2.19 | 4.39 | 4.04 | 45.55 |
| 1945 | 3.67 | 4.22 | 1.23 | 6.99 | 8.03 | 6.29 | 6.62 | 2.85 | 3.79 | 3.05 | 4.20 | 3.27 | 54.21 |
| 1946 | 2.93 | 3.13 | 1.51 | 2.51 | 6.20 | 4.14 | 3.35 | 4.70 | 5.36 | 1.57 | 1.05 | 4.61 | 41.06 |
| 1947 | 4.10 | 2.81 | 3.18 | 4.82 | 4.36 | 3.70 | 3.18 | 4.13 | 4.69 | 1.55 | 5.38 | 2.62 | 44.52 |
| 1948 | 2.51 | 2.92 | 2.60 | 3.98 | 8.31 | 6.46 | 1.53 | 1.65 | 1.24 | 1.74 | 5.68 | 4.39 | 43.01 |
| 1949 | 4.21 | 3.22 | 1.54 | 4.85 | 3.20 | 0.95 | 3.30 | 4.95 | 3.66 | 2.43 | 1.77 | 1.86 | 35.94 |
| 1950 | 5.03 | 4.42 | 3.58 | 3.10 | 4.47 | 3.20 | 2.92 | 5.21 | 1.47 | 2.50 | 6.30 | 4.86 | 47.06 |
| Av. 38 yrs. | 3.42 | 3.00 | 3.66 | 3.97 | 4.05 | 3.90 | 3.98 | 3.73 | 4.00 | 3.31 | 4.15 | 3.36 | 44.53 |

CONCORD, MASS.
Record: January, 1891, to December, 1950

| Year | Jan. | Feb. | Mar. | Apr. | May | June | July | Aug. | Sept. | Oct. | Nov. | Dec. | Annual |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1942 | 3.23 | 3.31 | 6.79 | 1.54 | 2.43 | 4.99 | 4.96 | 2.47 | 2.06 | 3.13 | 4.65 | 6.45 | 46.01 |
| 1943 | 2.84 | 1.27 | 4.32 | 5.04 | 4.62 | 2.77 | 4.90 | 1.40 | 0.64 | 4.77 | 4.16 | 0.99 | 35.72 |
| 1944 | 2.19 | 2.25 | 4.52 | 3.45 | 0.88 | 6.01 | 1.47 | 1.79 | 5.30 | 1.67 | 4.76 | 2.76 | 37.05 |
| 1945 | 3.05 | 4.04 | 1.83 | 2.71 | 4.44 | 5.75 | 3.33 | 3.29 | 1.21 | 2.33 | 5.64 | 6.10 | 43.70 |
| 1946 | 3.36 | 3.35 | 1.51 | 2.58 | 5.37 | 3.08 | 2.21 | 8.07 | 2.14 | 0.64 | 1.16 | 4.20 | 37.67 |
| 1947 | 2.87 | 1.81 | 2.95 | 3.93 | 4.41 | 3.35 | 5.39 | 2.52 | 2.73 | 0.71 | 4.90 | 3.83 | 39.40 |
| 1948 | 4.51 | 2.36 | 2.88 | 2.41 | 5.60 | 5.68 | 5.13 | 1.90 | 0.29 | 2.77 | 5.70 | 1.69 | 40.92 |
| 1949 | 4.08 | 2.21 | 2.15 | 3.24 | 3.11 | 0.93 | 1.36 | 0.86 | 5.20 | 1.80 | 2.00 | *2.61 | 29.55 |
| 1950 | *4.28 | *3.31 | *3.64 | 2.66 | 1.50 | 1.18 | 1.93 | 4.97 | 1.83 | 1.98 | 5.03 | *3.32 | *35.63 |
| Av. 60 yrs. | 3.36 | 3.13 | 3.50 | 3.36 | 3.14 | 3.45 | 3.42 | 3.37 | 3.58 | 2.89 | 3.46 | 3.38 | 40.04 |

*Estimated.

CUMMINGTON, MASS.—Elevation, 1,020 feet
Record: April, 1903, to December, 1950

| Year | Jan. | Feb. | Mar. | Apr. | May | June | July | Aug. | Sept. | Oct. | Nov. | Dec. | Annual |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1942 | 3.37 | 2.22 | 7.83 | 1.81 | 4.84 | 2.59 | 6.54 | 3.56 | 4.85 | 4.74 | 5.00 | 6.64 | 53.99 |
| 1943 | 3.29 | 1.73 | 3.76 | 4.56 | 7.15 | 3.72 | 5.89 | 1.97 | 1.02 | 5.62 | 6.55 | 0.76 | 46.02 |
| 1944 | 1.78 | 2.54 | 5.17 | 4.47 | 1.91 | 5.96 | 4.29 | 1.05 | 6.29 | 1.87 | 5.52 | 4.26 | 45.11 |
| 1945 | 4.22 | 4.41 | 2.92 | 6.35 | 7.24 | 6.57 | 6.91 | 2.95 | 3.53 | 2.96 | 4.15 | 4.07 | 56.28 |
| 1946 | 3.09 | 4.26 | 1.37 | 2.65 | 6.45 | 5.88 | 4.47 | 2.48 | 6.69 | 2.07 | 1.32 | 4.02 | 44.75 |
| 1947 | 4.19 | 2.87 | 5.12 | 5.00 | 3.46 | 3.00 | 4.38 | 2.42 | 3.09 | 2.40 | 5.44 | 3.35 | 44.72 |
| 1948 | 3.14 | 3.31 | 3.85 | 2.49 | 7.20 | 8.07 | 1.56 | 2.08 | 1.36 | 1.80 | 4.60 | 10.14 | 49.60 |
| 1949 | 5.28 | 4.26 | 2.37 | 4.48 | 4.40 | 2.02 | 3.65 | 3.41 | 3.07 | 2.49 | 1.78 | 2.48 | 39.69 |
| 1950 | 5.77 | 4.28 | 3.42 | 3.15 | 4.71 | 2.82 | 3.50 | 3.60 | 1.51 | 2.24 | 7.38 | 4.44 | 46.82 |
| Av. 33 yrs. | 3.84 | 3.29 | 3.95 | 4.07 | 3.97 | 4.46 | 3.93 | 3.65 | 4.32 | 3.25 | 4.38 | 3.81 | 46.92 |

DALTON, MASS.—Elevation, 1,200 feet
Record: January, 1906, to December, 1950

| Year | Jan. | Feb. | Mar. | Apr. | May | June | July | Aug. | Sept. | Oct. | Nov. | Dec. | Annual |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1942 | 2.57 | 1.47 | 6.29 | 1.66 | 4.64 | 3.95 | 6.99 | 2.98 | 6.73 | 4.67 | 5.44 | 5.04 | 52.43 |
| 1943 | 2.69 | 1.41 | 3.23 | 4.69 | 7.52 | 4.34 | 6.74 | 3.54 | 1.20 | 4.11 | 5.62 | 0.71 | 45.80 |
| 1944 | 1.85 | 2.33 | 3.68 | 3.99 | 2.96 | 4.83 | 6.98 | 2.91 | 6.31 | 2.29 | 4.21 | 3.55 | 45.89 |
| 1945 | 3.51 | 3.96 | 2.12 | 7.39 | 6.81 | 8.85 | 9.90 | 3.42 | 2.98 | 3.37 | 5.53 | 3.13 | 60.97 |
| 1946 | 2.64 | 3.74 | 1.25 | 2.21 | 7.05 | 6.75 | 4.42 | 3.09 | 6.91 | 2.63 | 1.54 | 3.41 | 45.64 |
| 1947 | 4.01 | 2.60 | 5.10 | 3.50 | 4.75 | 4.18 | 4.04 | 1.46 | 3.83 | 2.50 | 4.70 | 2.89 | 43.56 |
| 1948 | 2.50 | 2.90 | 3.84 | 4.64 | 8.06 | 7.82 | 2.21 | 2.66 | 1.12 | 1.81 | 4.31 | 10.56 | 52.43 |
| 1949 | 4.70 | 3.35 | 1.40 | 3.67 | 3.79 | 2.60 | 6.30 | 2.65 | 4.76 | 2.61 | 1.59 | 3.06 | 40.48 |
| 1950 | 4.76 | 3.76 | 2.17 | 3.17 | 2.96 | 3.63 | 4.61 | 3.88 | 2.07 | 1.56 | 6.61 | 2.89 | 42.07 |
| Av. 45 yrs. | 3.30 | 2.78 | 3.51 | 3.59 | 3.88 | 3.95 | 4.54 | 3.69 | 4.07 | 3.06 | 3.67 | 3.19 | 43.23 |

DEERFIELD, MASS. (South Deerfield)—Elevation, 210 feet
Record: June, 1934, to December, 1950

| Year | Jan. | Feb. | Mar. | Apr. | May | June | July | Aug. | Sept. | Oct. | Nov. | Dec. | Annual |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1942 | 3.86 | 2.25 | 7.54 | 1.21 | 5.38 | 2.90 | 6.07 | 4.82 | 5.97 | 4.43 | 5.42 | 7.43 | 57.28 |
| 1943 | 3.04 | 1.74 | 4.21 | 3.96 | 4.84 | 2.62 | 7.39 | 3.24 | 1.26 | 5.35 | 5.66 | 0.72 | 44.03 |
| 1944 | 1.77 | 2.30 | 5.11 | 4.48 | 1.78 | 6.13 | 3.67 | 2.07 | 6.25 | 2.23 | 4.82 | 3.20 | 43.81 |
| 1945 | 4.66 | 4.49 | — | — | — | — | — | — | — | — | — | — | — |
| 1946 | — | — | — | — | — | — | — | — | 6.68 | 1.57 | 0.76 | 3.56 | — |
| 1947 | 3.41 | 2.01 | 3.54 | 4.42 | 4.60 | 3.54 | 4.02 | 3.61 | 3.09 | 2.57 | 6.12 | 2.31 | 43.24 |
| 1948 | 2.36 | 1.66 | 3.02 | 2.85 | 6.65 | 7.25 | 1.49 | 1.90 | 2.31 | 1.25 | 4.92 | 4.13 | 39.79 |
| 1949 | 5.09 | 3.47 | 1.12 | 3.58 | 4.39 | 1.14 | 3.86 | 3.49 | 2.75 | 2.87 | 2.29 | 2.76 | 36.31 |
| 1950 | 5.30 | 3.98 | 3.52 | 3.76 | 4.25 | 3.47 | 2.21 | 3.45 | 1.32 | 2.21 | 5.84 | 4.91 | 44.22 |
| Av. 14 yrs. | 4.25 | 2.76 | 4.15 | 3.90 | 4.24 | 4.67 | 4.16 | 3.48 | 3.95 | 2.92 | 4.58 | 3.80 | 46.86 |

DEERFIELD RIVER WATERSHED, MASS. (Above Charlemont)
Record: July, 1913, to December, 1950

| Year | Jan. | Feb. | Mar. | Apr. | May | June | July | Aug. | Sept. | Oct. | Nov. | Dec. | Annual |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1942 | 2.82 | 3.34 | 6.38 | 2.52 | 5.07 | 3.09 | 6.51 | 1.82 | 5.62 | 3.59 | 5.88 | 5.71 | 52.35 |
| 1943 | 3.26 | 2.43 | 3.36 | 4.51 | 8.29 | 3.50 | 4.88 | 5.04 | 1.72 | 5.88 | 6.34 | 0.81 | 50.02 |
| 1944 | 1.65 | 3.08 | 5.49 | 4.73 | 1.53 | 7.22 | 4.70 | 2.04 | 6.36 | 2.48 | 3.38 | 4.56 | 47.22 |
| 1945 | 4.62 | 4.97 | 1.92 | 7.30 | 7.82 | 6.84 | 7.46 | 2.30 | 4.03 | 4.21 | 5.14 | 3.15 | 59.76 |
| 1946 | 3.28 | 4.04 | 1.75 | 2.92 | 7.43 | 4.89 | 3.88 | 4.12 | 5.10 | 3.16 | 2.14 | 5.78 | 48.49 |
| 1947 | 4.78 | 2.91 | 5.95 | 4.80 | 6.14 | 5.26 | 6.07 | 4.84 | 2.48 | 1.61 | 5.72 | 3.29 | 53.85 |
| 1948 | 3.19 | 3.72 | 4.47 | 4.60 | 8.64 | 5.58 | 2.54 | 2.45 | 0.93 | 1.99 | 6.35 | 8.38 | 52.84 |
| 1949 | 6.50 | 3.47 | 2.86 | 4.74 | 4.26 | 1.74 | 3.94 | 4.38 | 5.43 | 2.67 | 2.56 | 3.37 | 45.92 |
| 1950 | 6.51 | 5.07 | 4.44 | 3.36 | 4.56 | 4.02 | 3.49 | 6.06 | 4.43 | 2.89 | 7.00 | 4.56 | 56.39 |
| Av. 37 yrs. | 3.86 | 3.38 | 3.92 | 4.14 | 4.31 | 4.33 | 4.48 | 4.02 | 4.23 | 3.44 | 4.39 | 3.84 | 48.34 |

DUDLEY, MASS. (Stevens Linen Works)—Elevation, 450 feet
Record: January, 1892, to December, 1950

| Year | Jan. | Feb. | Mar. | Apr. | May | June | July | Aug. | Sept. | Oct. | Nov. | Dec. | Annual |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1942 | 3.95 | 2.66 | 7.81 | 0.95 | 2.23 | 3.04 | 4.20 | 2.42 | 1.88 | 3.75 | 4.87 | 6.49 | 44.25 |
| 1943 | 3.72 | 1.42 | 4.28 | 3.51 | 4.17 | 1.86 | 4.37 | 0.99 | 0.57 | 5.09 | 4.02 | 1.03 | 35.03 |
| 1944 | 1.22 | 2.19 | 4.88 | 5.22 | 1.13 | 4.58 | 1.75 | 1.12 | 8.16 | 1.80 | 5.82 | 3.24 | 41.11 |
| 1945 | 3.33 | 3.66 | 2.23 | 3.88 | 5.69 | 4.74 | 2.25 | 2.84 | 1.04 | 2.15 | 6.86 | 5.88 | 44.55 |
| 1946 | 3.73 | 3.52 | 1.38 | 2.17 | 5.29 | 4.77 | 2.04 | 4.01 | 1.46 | 1.80 | 1.29 | 3.40 | 34.86 |
| 1947 | 0.88 | 2.31 | 2.91 | 3.64 | 2.52 | *2.26 | *3.99 | *2.00 | 2.27 | 1.68 | 3.16 | 2.67 | *30.29 |
| 1948 | 2.48 | 1.65 | 3.73 | 2.65 | 6.04 | 3.98 | *5.09 | *2.04 | *0.86 | *2.26 | *5.91 | *3.29 | *39.98 |
| 1949 | 0.63 | 2.96 | 2.43 | 2.83 | 4.01 | 0.09 | 1.26 | 2.16 | 4.06 | 1.62 | 2.33 | 1.60 | 25.98 |
| 1950 | 4.45 | 2.24 | 2.88 | 3.41 | 3.13 | 3.07 | 2.01 | 4.39 | 1.33 | 1.65 | 6.24 | 3.38 | 38.18 |
| Av. 59 yrs. | 3.34 | 3.10 | 3.93 | 3.38 | 3.30 | 3.52 | 3.45 | 3.63 | 3.70 | 3.04 | 3.62 | 3.52 | 41.53 |

*Estimated.

EGREMONT, MASS. (South Egremont)—Elevation, 750 feet
Record: January, 1903, to December, 1950

| Year | Jan. | Feb. | Mar. | Apr. | May | June | July | Aug. | Sept. | Oct. | Nov. | Dec. | Annual |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1942 | 3.97 | 1.55 | 5.63 | 1.39 | 3.28 | 2.54 | 5.41 | 3.20 | 5.55 | 4.72 | 5.22 | 6.13 | 48.59 |
| 1943 | 3.50 | 1.67 | 3.60 | 3.06 | 5.70 | 3.53 | 5.31 | 1.97 | 1.16 | 4.74 | 4.87 | 0.67 | 39.78 |
| 1944 | 1.26 | 2.32 | 4.76 | 3.19 | 1.79 | 6.95 | 5.20 | 1.74 | 4.67 | 2.30 | 4.28 | 2.10 | 40.56 |
| 1945 | 3.74 | 3.08 | 1.73 | 5.61 | 6.62 | 5.61 | 13.50 | 3.62 | 4.00 | 2.46 | 4.43 | 3.84 | 58.24 |
| 1946 | 1.81 | 3.17 | 1.35 | 1.84 | 5.70 | 3.33 | 4.48 | 2.77 | 5.46 | 1.90 | 0.85 | 2.78 | 35.44 |
| 1947 | 3.33 | 1.83 | 3.22 | 4.36 | 4.63 | 3.01 | 3.41 | 3.24 | 2.76 | 3.14 | 5.14 | 2.07 | 40.14 |
| 1948 | 2.36 | 1.99 | 4.67 | 2.78 | 6.29 | 7.63 | 2.98 | 1.53 | 1.50 | 1.45 | 3.79 | 11.59 | 48.56 |
| 1949 | 4.34 | 2.26 | 1.11 | 3.14 | 4.50 | 1.25 | 4.93 | 3.76 | 3.84 | 2.07 | 1.59 | 3.45 | 36.24 |
| 1950 | 4.04 | 3.39 | 2.40 | 2.76 | 3.06 | 5.62 | 4.14 | 3.05 | 1.29 | 1.85 | 6.09 | 3.77 | 41.46 |
| Av. 45 yrs. | 3.08 | 2.72 | 2.84 | 3.32 | 3.57 | 4.33 | 4.50 | 4.29 | 3.91 | 3.17 | 3.41 | 3.18 | 42.32 |

FALL RIVER, MASS. (Water Works Pumping Station)—Elevation, 210 feet
Record: January, 1873, to December, 1950

| Year | Jan. | Feb. | Mar. | Apr. | May | June | July | Aug. | Sept. | Oct. | Nov. | Dec. | Annual |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1942 | 4.47 | 3.37 | 8.91 | 1.01 | 1.53 | 1.52 | 2.54 | 6.72 | 2.08 | 4.11 | 5.29 | 4.57 | 46.12 |
| 1943 | 3.60 | 1.84 | 3.48 | 3.42 | 2.75 | 1.35 | 2.60 | 2.67 | 1.54 | 3.92 | 2.85 | 1.46 | 31.48 |
| 1944 | 2.56 | 2.40 | 5.16 | 3.95 | 0.72 | 3.54 | 0.59 | 1.63 | 6.17 | 1.93 | 7.96 | 3.23 | 39.84 |
| 1945 | 4.17 | 4.45 | 2.53 | 2.65 | 3.85 | 3.18 | 1.59 | 2.27 | 1.09 | 3.53 | 8.80 | 8.91 | 47.02 |
| 1946 | 4.42 | 2.36 | 2.09 | 2.21 | 4.63 | 3.75 | 2.00 | 14.84 | 2.32 | 0.68 | 1.14 | 3.67 | 44.11 |
| 1947 | 3.32 | 2.03 | 3.18 | 4.58 | 5.63 | 3.63 | 4.36 | 2.13 | 2.30 | 3.90 | 4.89 | 3.16 | 43.11 |
| 1948 | 6.41 | 2.61 | 3.84 | 3.98 | 9.29 | 2.68 | 4.66 | 1.27 | 1.97 | 4.80 | 5.86 | 2.73 | 50.10 |
| 1949 | 4.31 | 4.46 | 2.98 | 5.24 | 3.40 | 0.02 | 1.53 | 2.45 | 2.57 | 1.03 | 3.50 | 3.01 | 34.50 |
| 1950 | 4.61 | 5.13 | 3.77 | 2.48 | 2.20 | 2.68 | 0.76 | 3.44 | 1.46 | 1.34 | 5.80 | 4.54 | 38.21 |
| Av. 78 yrs. | 4.33 | 3.80 | 4.44 | 3.99 | 3.39 | 3.07 | 3.21 | 4.05 | 3.26 | 3.70 | 4.25 | 3.94 | 45.43 |

FALL RIVER, MASS. (U.S. Weather Bureau)—Elevation, 190 feet
Record: January, 1893, to December, 1950

| Year | Jan. | Feb. | Mar. | Apr. | May | June | July | Aug. | Sept. | Oct. | Nov. | Dec. | Annual |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1942 | 4.22 | 3.10 | 7.53 | 1.16 | 2.03 | 2.10 | 2.88 | 7.24 | 1.66 | 4.00 | 5.20 | 4.05 | 45.17 |
| 1943 | 3.32 | 2.05 | 3.48 | 3.00 | 3.71 | 1.26 | 2.51 | 3.01 | 1.14 | 4.10 | 2.81 | 1.36 | 31.75 |
| 1944 | 2.30 | 2.12 | 4.66 | 3.95 | 0.82 | 3.97 | 0.90 | 1.94 | 6.80 | 1.68 | 7.54 | 3.16 | 39.84 |
| 1945 | 4.00 | 3.81 | 2.41 | 2.63 | 4.16 | 3.33 | 1.26 | 2.44 | 1.33 | 3.14 | 8.12 | 7.23 | 43.86 |
| 1946 | 3.66 | 2.61 | 2.18 | 2.24 | 4.39 | 3.45 | 1.73 | 16.10 | 2.44 | 1.03 | 1.04 | 3.18 | 44.05 |
| 1947 | 3.51 | 1.29 | 2.76 | 4.54 | 5.73 | 3.88 | 5.06 | 2.00 | 3.65 | 2.97 | 4.66 | 3.10 | 43.15 |
| 1948 | 6.22 | 2.69 | 3.92 | 3.84 | 10.33 | 2.93 | 6.53 | 1.50 | 2.06 | 3.89 | 5.93 | 2.42 | 52.26 |
| 1949 | 4.27 | 4.35 | 2.68 | 5.27 | 3.39 | 0.02 | 1.87 | 2.94 | 2.92 | 1.28 | 3.16 | 2.52 | 34.67 |
| 1950 | 4.39 | 4.05 | 3.33 | 2.57 | 2.23 | 3.26 | 1.09 | 3.72 | 1.46 | 1.40 | 6.24 | 4.36 | 38.10 |
| Av. 58 yrs. | 4.03 | 3.66 | 4.10 | 3.96 | 3.40 | 3.14 | 3.12 | 4.10 | 3.37 | 3.48 | 3.84 | 4.06 | 44.26 |

FALMOUTH, MASS. (Hatchville)—Elevation, 70 feet
Record: January, 1919, to December, 1950

| Year | Jan. | Feb. | Mar. | Apr. | May | June | July | Aug. | Sept. | Oct. | Nov. | Dec. | Annual |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1942 | 4.62 | 3.29 | 7.95 | 0.61 | 2.28 | 3.02 | 2.51 | 7.18 | 4.38 | 4.40 | 4.21 | 3.53 | 48.03 |
| 1943 | 4.50 | 2.25 | 3.89 | 3.85 | 3.88 | 1.97 | 4.52 | 6.20 | 3.04 | 3.21 | 3.11 | 1.48 | 41.90 |
| 1944 | 3.40 | 2.06 | 5.51 | 5.70 | 0.92 | 2.05 | 0.63 | 1.55 | 4.13 | 3.01 | 10.92 | 3.74 | 43.62 |
| 1945 | 3.74 | 4.00 | 2.33 | 1.77 | 4.14 | 5.75 | 1.08 | 2.39 | 1.19 | 3.32 | 10.10 | 6.61 | 46.42 |
| 1946 | 3.99 | 2.71 | 1.57 | 3.19 | 5.55 | 3.00 | 2.42 | 13.87 | 1.64 | 0.19 | 0.81 | 3.77 | 42.71 |
| 1947 | 4.14 | 1.92 | 2.74 | 7.20 | 3.62 | 3.40 | 3.04 | 0.62 | 1.62 | 2.98 | 3.47 | 3.19 | 37.94 |
| 1948 | 6.17 | 2.73 | 3.59 | 4.94 | 8.12 | 2.19 | 1.66 | 1.88 | 2.29 | 5.76 | 4.85 | 2.42 | 46.60 |
| 1949 | 4.19 | 5.16 | 2.62 | 4.79 | 3.81 | 0.00 | 0.98 | 1.54 | 2.35 | 1.66 | 3.37 | 3.01 | 33.48 |
| 1950 | 3.15 | 4.39 | 4.47 | 3.98 | 2.67 | 3.83 | 1.90 | 4.13 | 3.24 | 1.04 | 6.25 | 4.14 | 43.19 |
| Av. 52 yrs. | 3.88 | 3.33 | 4.23 | 4.10 | 3.51 | 3.70 | 2.96 | 4.37 | 3.97 | 3.66 | 4.28 | 3.67 | 45.66 |

FITCHBURG, MASS. (Sentinel Office)—Roof Gage
Record: June, 1927, to December, 1950

| Year | Jan. | Feb. | Mar. | Apr. | May | June | July | Aug. | Sept. | Oct. | Nov. | Dec. | Annual |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1942 | 4.02 | 2.94 | 6.95 | 1.33 | 2.93 | 5.84 | 4.93 | 2.38 | 2.73 | 3.59 | 4.94 | 5.21 | 47.79 |
| 1943 | 3.82 | 1.01 | 3.03 | 3.05 | 6.29 | 2.01 | 4.11 | 2.23 | 1.22 | 6.31 | 5.58 | 0.71 | 39.37 |
| 1944 | 1.79 | 2.67 | 4.27 | 4.78 | 1.31 | 12.29 | 2.88 | 0.46 | 8.15 | 1.84 | 4.04 | 3.46 | 47.94 |
| 1945 | 3.69 | 4.51 | 1.83 | 4.45 | 5.87 | 7.53 | 4.44 | 3.65 | 2.23 | 2.33 | 5.92 | 5.58 | 52.03 |
| 1946 | 3.17 | 3.64 | 1.59 | 2.94 | 7.44 | 4.57 | 4.56 | 4.96 | 5.54 | 3.92 | 0.93 | 4.55 | 47.81 |
| 1947 | 3.23 | 2.40 | 3.09 | 4.50 | 3.16 | 4.05 | 2.72 | 1.39 | 2.83 | 1.33 | 7.20 | 3.81 | 39.71 |
| 1948 | 3.60 | 2.51 | 2.96 | 3.24 | 6.84 | 5.49 | 3.41 | 1.30 | 1.68 | 3.08 | 6.65 | 2.90 | 43.66 |
| 1949 | 4.57 | 3.24 | 1.39 | 4.71 | 4.04 | 0.92 | 1.68 | 2.86 | 3.04 | 2.04 | 1.95 | 2.32 | 32.76 |
| 1950 | 4.69 | 3.48 | 3.73 | 3.24 | 2.54 | 2.44 | 1.49 | 3.19 | 2.07 | 2.55 | 5.76 | 4.64 | 39.82 |
| Av. 23 yrs. | 3.60 | 2.95 | 3.89 | 4.14 | 3.89 | 4.70 | 3.43 | 3.25 | 3.98 | 3.16 | 3.95 | 3.38 | 44.32 |

FITCHBURG, MASS. (Sewage Works)—Elevation, 400 feet
Record: January, 1920, to December, 1950

| Year | Jan. | Feb. | Mar. | Apr. | May | June | July | Aug. | Sept. | Oct. | Nov. | Dec. | Annual |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1942 | 3.39 | 3.88 | 6.73 | 1.53 | 3.25 | 6.43 | 5.14 | 1.94 | 2.34 | 2.97 | 5.02 | 5.58 | 48.20 |
| 1943 | 4.12 | 1.44 | 3.57 | 3.52 | 5.85 | 1.97 | 4.00 | 3.31 | 1.26 | 6.15 | 4.93 | 0.73 | 40.85 |
| 1944 | 1.73 | 2.70 | 4.36 | 4.40 | 1.29 | 11.56 | 1.94 | 0.54 | 6.41 | 1.86 | 3.45 | 3.23 | 43.47 |
| 1945 | 3.58 | 4.73 | 1.78 | 4.17 | 5.11 | 6.36 | 4.23 | 3.12 | 2.11 | 2.14 | 5.37 | 5.61 | 48.31 |
| 1946 | 3.66 | 3.80 | 1.59 | 2.52 | 6.15 | 3.95 | 4.32 | 4.77 | 5.54 | 0.72 | 0.94 | 4.07 | 42.03 |
| 1947 | 2.95 | 2.04 | 2.58 | 4.80 | 3.37 | 3.41 | 2.90 | 1.44 | 3.19 | 1.34 | 7.34 | 3.51 | 38.87 |
| 1948 | 3.66 | 2.02 | 2.77 | 3.14 | 6.66 | 5.84 | 3.58 | 1.61 | 0.38 | 3.05 | 6.88 | 1.50 | 41.09 |
| 1949 | 4.27 | 2.94 | 2.15 | 4.84 | 3.87 | 1.08 | 1.29 | 1.38 | 4.65 | 2.24 | 2.14 | 1.90 | 32.75 |
| 1950 | 4.48 | 3.78 | 4.06 | 3.23 | 2.28 | 2.05 | 2.34 | *3.20 | 1.69 | 3.16 | 5.88 | 4.40 | *40.55 |
| Av. 31 yrs. | 3.72 | 3.20 | 3.72 | 3.96 | 3.57 | 4.05 | 3.48 | 3.09 | 3.66 | 2.91 | 4.10 | 3.61 | 43.07 |

*Estimated.

FLORIDA, MASS. (Hoosac Tunnel)—Elevation, 800 feet
Record: May, 1930, to December, 1950

| Year | Jan. | Feb. | Mar. | Apr. | May | June | July | Aug. | Sept. | Oct. | Nov. | Dec. | Annual |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1942 | 2.74 | 2.83 | 7.11 | 2.38 | 4.58 | 2.43 | 6.38 | 1.58 | 4.64 | 3.18 | 7.07 | 6.06 | 50.98 |
| 1943 | 3.20 | 1.92 | 3.12 | 4.28 | 8.67 | 3.04 | 7.41 | 3.77 | 0.94 | 5.30 | 5.71 | 0.71 | 43.07 |
| 1944 | 1.64 | 2.69 | 4.96 | 4.22 | 1.32 | 6.71 | 4.24 | 1.25 | 6.51 | 2.33 | 2.79 | 4.31 | 42.97 |
| 1945 | 4.04 | 4.21 | 1.77 | 7.11 | 6.62 | 6.56 | 6.69 | *2.89 | 3.19 | 3.39 | 4.44 | 2.53 | 53.44 |
| 1946 | 2.80 | 3.54 | 1.86 | 2.59 | 6.73 | 4.69 | 4.19 | 3.85 | 5.62 | 3.09 | 1.56 | 4.77 | 44.79 |
| 1947 | 4.42 | 1.84 | 5.11 | 4.90 | 4.80 | 4.34 | 4.58 | 2.51 | 2.78 | 1.25 | 5.17 | 2.25 | 43.95 |
| 1948 | 2.85 | 3.58 | 3.76 | 4.14 | 7.79 | 6.55 | 2.65 | 2.19 | 1.61 | 1.70 | 5.21 | 7.65 | 49.68 |
| 1949 | 7.31 | 3.16 | 2.38 | 4.46 | 3.48 | 1.63 | 4.83 | 2.92 | 3.99 | 2.57 | 2.56 | 2.82 | 42.11 |
| 1950 | 5.92 | 4.51 | 3.45 | 2.96 | 4.54 | 4.01 | 3.95 | 3.39 | 3.06 | 2.08 | 7.34 | 3.77 | 48.98 |
| Av. 20 yrs. | 4.04 | 3.03 | 3.87 | 4.13 | 4.34 | 4.25 | 4.46 | 3.30 | 4.40 | 2.88 | 3.99 | 3.77 | 46.46 |

FRAMINGHAM, MASS.—Elevation, 160 feet
Record: January, 1876, to December, 1950

| Year | Jan. | Feb. | Mar. | Apr. | May | June | July | Aug. | Sept. | Oct. | Nov. | Dec. | Annual |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1942 | 3.62 | 3.71 | 7.02 | 1.73 | 2.19 | 3.47 | 8.01 | 2.18 | 1.88 | 3.11 | 4.99 | 6.90 | 48.81 |
| 1943 | 3.28 | 1.49 | 3.85 | 3.56 | 4.43 | 2.04 | 4.29 | 1.87 | 0.85 | 5.60 | 3.83 | 1.15 | 36.24 |
| 1944 | 1.71 | 2.66 | 4.67 | 4.52 | 0.89 | 5.71 | 2.08 | 1.33 | 5.96 | 1.99 | 6.43 | 3.50 | 41.45 |
| 1945 | 3.12 | 4.76 | 2.10 | 2.98 | 4.88 | 5.51 | 2.95 | 4.21 | 1.35 | 2.19 | 6.98 | 6.74 | 47.77 |
| 1946 | 3.79 | 3.42 | 1.64 | 2.85 | 5.09 | 2.89 | 1.92 | 8.70 | 4.66 | 0.50 | 1.28 | 4.19 | 40.93 |
| 1947 | 3.20 | 2.08 | 3.34 | 4.61 | 4.05 | 3.25 | 4.88 | 1.55 | 3.74 | 1.17 | 5.56 | 4.21 | 41.64 |
| 1948 | 5.58 | 2.37 | 3.58 | 2.91 | 5.99 | 4.87 | 5.05 | 1.73 | 0.85 | 2.86 | 6.56 | 1.74 | 44.09 |
| 1949 | 3.73 | 3.19 | 2.00 | 3.89 | 3.74 | 0.95 | 1.60 | 4.79 | 3.27 | 1.58 | 2.53 | 2.27 | 33.54 |
| 1950 | 4.14 | 4.26 | 3.59 | 3.44 | 1.75 | 2.21 | 2.00 | 6.95 | 1.76 | 2.28 | 6.80 | 3.76 | 42.94 |
| Av. 75 yrs. | 3.96 | 3.78 | 4.17 | 3.62 | 3.24 | 3.31 | 3.54 | 3.72 | 3.46 | 3.27 | 3.86 | 3.79 | 43.72 |

FRANKLIN, MASS. (Water Works)—Elevation, 240 feet
Record: July, 1922, to December, 1950

| Year | Jan. | Feb. | Mar. | Apr. | May | June | July | Aug. | Sept. | Oct. | Nov. | Dec. | Annual |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1942 | 4.43 | 3.01 | 7.76 | 1.03 | 2.27 | 3.29 | 5.03 | 3.13 | 1.89 | 3.80 | 5.76 | 5.50 | 46.90 |
| 1943 | 3.60 | 1.26 | 3.63 | 4.20 | 5.16 | 2.38 | 5.15 | 1.61 | 0.75 | 5.97 | 3.11 | 1.01 | 37.83 |
| 1944 | 1.46 | 2.16 | 4.38 | 4.20 | 1.93 | 5.06 | 0.74 | 0.85 | 7.92 | 3.26 | 6.84 | 3.67 | 42.47 |
| 1945 | 3.02 | 4.03 | 1.83 | 3.07 | 4.94 | 5.31 | 2.88 | 6.04 | 1.56 | 2.32 | 8.48 | 7.08 | 50.56 |
| 1946 | 3.77 | 3.05 | 1.66 | 2.52 | 5.16 | 4.23 | 1.69 | 9.90 | 3.82 | 0.43 | 0.93 | 3.96 | 41.12 |
| 1947 | 2.71 | 1.51 | 3.15 | 4.79 | 4.91 | 4.00 | 3.51 | 2.54 | 5.68 | 1.56 | 6.55 | 3.47 | 44.38 |
| 1948 | 5.23 | 1.80 | 3.04 | 3.18 | 6.40 | 3.93 | 6.43 | 1.71 | 0.96 | 3.75 | 5.86 | 1.96 | 44.25 |
| 1949 | 3.49 | 3.24 | 1.76 | 3.95 | 3.16 | 0.27 | 0.62 | 6.02 | 3.23 | 1.58 | 3.61 | *1.60 | *32.53 |
| 1950 | 3.36 | 3.80 | 3.57 | 3.62 | 1.94 | 2.30 | 3.33 | 4.09 | 1.70 | 2.45 | 6.12 | 3.71 | 39.99 |
| Av. 28 yrs. | 3.66 | 2.84 | 3.52 | 3.55 | 3.18 | 3.61 | 3.27 | 4.07 | 3.41 | 3.06 | 3.87 | 3.47 | 41.51 |

*Estimated.

FRANKLIN, MASS.—Elevation, 320 feet
Record: September, 1941, to December, 1950

| Year | Jan. | Feb. | Mar. | Apr. | May | June | July | Aug. | Sept. | Oct. | Nov. | Dec. | Annual |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1941 | — | — | — | — | — | — | — | — | 0.26 | 1.40 | 2.70 | 3.80 | — |
| 1942 | 4.43 | 3.01 | 7.76 | 1.03 | 2.27 | 3.29 | 5.03 | 3.13 | 1.89 | 3.80 | 5.76 | 5.50 | 46.90 |
| 1943 | 3.60 | 1.26 | 3.63 | 4.20 | 5.16 | 2.38 | 5.15 | 1.61 | 0.75 | 5.97 | 3.11 | 1.01 | 37.83 |
| 1944 | 1.46 | 2.16 | 4.38 | 4.20 | 1.93 | 5.06 | 1.07 | 0.96 | 7.48 | 3.28 | 6.48 | 3.55 | 42.01 |
| 1945 | 2.79 | 5.35 | 2.10 | 3.26 | 4.45 | 5.55 | 3.33 | 5.14 | 1.77 | 2.48 | 8.27 | 6.70 | 51.19 |
| 1946 | 3.72 | 3.47 | 1.91 | 2.32 | 5.83 | 4.67 | 1.78 | 10.45 | 3.21 | 0.51 | 0.97 | 3.95 | 42.79 |
| 1947 | 2.50 | 1.42 | 3.22 | 4.68 | 4.55 | 4.21 | 3.47 | 2.75 | 4.68 | 1.58 | 6.32 | 3.99 | 43.37 |
| 1948 | 5.77 | 1.79 | 3.25 | 3.04 | 6.48 | 4.01 | 6.51 | 1.88 | 1.09 | 4.15 | 6.16 | 2.29 | 46.42 |
| 1949 | 3.90 | 3.37 | 1.67 | 4.36 | 3.84 | 0.26 | 0.57 | 6.80 | 3.79 | 1.50 | 3.08 | 1.47 | 34.91 |
| 1950 | 4.05 | 4.45 | 3.70 | 4.11 | 2.19 | 2.42 | 3.16 | 4.46 | 1.74 | 2.60 | 6.71 | 4.26 | 43.85 |
| Av. 9 yrs. | 3.58 | 2.92 | 3.51 | 3.47 | 4.08 | 3.54 | 3.34 | 4.13 | 2.93 | 2.91 | 5.21 | 3.64 | 43.26 |

GARDNER, MASS.—Elevation, 1,110 feet
Record: July, 1906, to December, 1950

| Year | Jan. | Feb. | Mar. | Apr. | May | June | July | Aug. | Sept. | Oct. | Nov. | Dec. | Annual |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1942 | 3.69 | 1.94 | 7.07 | 1.27 | 3.72 | 5.46 | 6.15 | 2.12 | 3.18 | 3.77 | 4.28 | 3.78 | 46.43 |
| 1943 | 2.83 | 1.37 | 2.56 | 4.03 | 5.48 | 1.77 | 5.31 | 2.90 | 1.35 | 5.27 | 4.99 | 0.53 | 38.39 |
| 1944 | 1.50 | 1.87 | 4.02 | 3.45 | 1.28 | 8.23 | 3.41 | 0.45 | 7.13 | 1.57 | 3.40 | 3.62 | 39.93 |
| 1945 | 2.75 | 3.61 | 1.27 | 4.78 | 5.24 | 5.76 | 5.52 | 3.46 | 1.56 | 2.78 | 3.33 | 3.84 | 43.90 |
| 1946 | 2.78 | 3.44 | 1.46 | 1.84 | 6.01 | 4.39 | 3.08 | 5.59 | 5.93 | 0.90 | 0.89 | 3.08 | 39.39 |
| 1947 | 2.55 | 2.11 | 3.27 | 3.26 | 2.28 | 3.47 | 5.53 | 3.62 | 3.41 | 0.97 | 5.94 | 2.04 | 38.45 |
| 1948 | 2.45 | 2.18 | 2.84 | 2.93 | 6.07 | 5.16 | 3.98 | 1.76 | 1.24 | 1.81 | 6.38 | 2.91 | 39.71 |
| 1949 | 4.09 | 2.79 | 1.32 | 4.40 | 4.52 | 0.70 | 2.42 | 2.79 | 3.27 | 2.10 | 1.77 | 2.45 | 32.62 |
| 1950 | 3.84 | 2.65 | 2.40 | 3.00 | 2.37 | 3.64 | 2.80 | 3.29 | 1.24 | 3.12 | 6.93 | 2.12 | 37.40 |
| Av. 44 yrs. | 3.29 | 3.03 | 3.48 | 3.57 | 3.30 | 3.94 | 3.85 | 3.72 | 3.84 | 2.88 | 3.79 | 3.23 | 41.92 |

GLOUCESTER, MASS. (Water Works)—Elevation, 40 feet
Record: January, 1915, to December, 1950

| Year | Jan. | Feb. | Mar. | Apr. | May | June | July | Aug. | Sept. | Oct. | Nov. | Dec. | Annual |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1942 | 3.82 | 4.33 | 7.29 | 1.66 | 2.37 | 5.25 | 4.15 | 4.26 | 2.39 | 2.51 | 5.73 | 4.17 | 47.93 |
| 1943 | 3.07 | 1.35 | 2.98 | 2.65 | 5.84 | 1.20 | 3.49 | 1.45 | 2.61 | 4.86 | 3.25 | 1.28 | 34.03 |
| 1944 | 2.51 | 3.15 | 3.75 | 3.82 | 0.32 | 4.85 | 1.28 | 1.59 | 5.35 | 2.22 | 7.26 | 3.60 | 39.70 |
| 1945 | 4.48 | 4.54 | 2.00 | 2.49 | 4.03 | 5.58 | 3.43 | 3.04 | 1.51 | 2.93 | 8.50 | 11.17 | 53.70 |
| 1946 | 4.82 | 3.55 | 1.53 | 3.26 | 6.15 | 2.58 | 1.26 | 10.43 | 2.74 | 0.52 | 1.64 | 4.47 | 42.95 |
| 1947 | 3.01 | 1.08 | 2.71 | 4.90 | 4.26 | 2.77 | 4.95 | 1.90 | 3.13 | 0.59 | 5.72 | 4.57 | 39.59 |
| 1948 | 6.50 | 2.49 | 3.56 | 2.98 | 5.52 | 4.96 | 3.78 | 1.01 | 0.17 | 4.66 | 5.35 | 2.44 | 43.42 |
| 1949 | 4.87 | 3.98 | 1.55 | 3.29 | 3.15 | 0.39 | 2.39 | 2.52 | 5.87 | 1.69 | 4.26 | 2.07 | 36.03 |
| 1950 | 5.00 | 3.84 | 3.60 | 1.49 | 1 23 | 1.30 | 1.62 | 2.90 | 0.83 | 1.61 | 6.31 | 3.27 | 33.00 |
| Av. 36 yrs. | 4.12 | 3.49 | 4.16 | 4.12 | 3.34 | 3.86 | 3.50 | 3.32 | 3.71 | 3.21 | 4.25 | 4.12 | 45.20 |

GLOUCESTER, MASS. (Eastern Point)—Elevation, 15 feet
Record: April, 1930, to December, 1946

| Year | Jan. | Feb. | Mar. | Apr. | May | June | July | Aug. | Sept. | Oct. | Nov. | Dec. | Annual |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1942 | 3.18 | 4.69 | 6.81 | 1.82 | 2.72 | 5.57 | 4.73 | 4.25 | 2.26 | 2.46 | 5.65 | 4.66 | 48.80 |
| 1943 | 4.17 | 1.27 | 3.72 | 2.63 | 5.37 | 1.48 | 3.19 | 1.45 | 1.65 | 5.05 | 3.62 | 1.27 | 34.87 |
| 1944 | 2.78 | 3.16 | 3.94 | 3.87 | 0.81 | 5.06 | 1.71 | 1.10 | 7.15 | 2.40 | 7.21 | 3.84 | 43.03 |
| 1945 | 4.94 | 4.50 | 1.88 | 2.64 | 4.14 | 5.54 | 3.77 | 2.75 | 2.61 | 2.96 | 7.75 | 10.04 | 53.52 |
| 1946 | 5.00 | 4.24 | 1.49 | 2.94 | 5.76 | 2.64 | 1.22 | 11.01 | 2.63 | 0.68 | 1.80 | 4.67 | 44.08 |
| Av. 16 yrs. | 4.62 | 3.81 | 4.48 | 4.13 | 3.14 | 4.06 | 3.05 | 3.38 | 4.28 | 3.32 | 4.07 | 4.13 | 46.47 |

GRANVILLE, MASS. (Westfield Water Works)—Elevation, 540 feet
Record: June, 1930, to December, 1950

| Year | Jan. | Feb. | Mar. | Apr. | May | June | July | Aug. | Sept. | Oct. | Nov. | Dec. | Annual |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1942 | 3.42 | 2.28 | 5.93 | 0.81 | 5.39 | 3.53 | 6.67 | 2.06 | 4.56 | 5.00 | 4.99 | 5.99 | 50.63 |
| 1943 | 2.38 | 1.44 | 2.70 | 3.13 | 6.20 | 3.74 | 6.12 | 1.45 | 2.50 | 6.04 | 4.45 | 0.58 | 40.73 |
| 1944 | 1.35 | 2.10 | 4.34 | 3.91 | 1.34 | 4.40 | 1.80 | 1.13 | 5.75 | 2.20 | 5.12 | 3.95 | 37.39 |
| 1945 | 2.88 | 4.41 | 2.09 | 4.74 | 6.98 | 5.49 | 7.92 | 5.00 | 3.51 | 2.57 | 4.34 | 4.06 | 53.99 |
| 1946 | 2.46 | 2.52 | 1.50 | 2.12 | 6.67 | 2.75 | 5.33 | 2.41 | 4.70 | 1.50 | 0.79 | 2.81 | 35.56 |
| 1947 | 3.18 | 2.23 | 3.69 | 4.72 | 5.12 | 3.26 | 5.24 | 2.13 | 3.91 | 3.17 | 6.71 | 1.99 | 45.35 |
| 1948 | 2.43 | 2.08 | 3.60 | 2.87 | 4.90 | 6.26 | 3.95 | 2.91 | 1.48 | 2.06 | 4.52 | 9.58 | 46.64 |
| 1949 | 5.56 | 3.30 | 1.35 | 4.08 | 4.53 | 0.71 | 2.63 | 2.80 | 3.17 | 2.70 | 1.85 | 2.85 | 35.53 |
| 1950 | 4.80 | 4.57 | 3.55 | 3.08 | 4.42 | 4.40 | 2.13 | 4.24 | 1.40 | 3.00 | 7.02 | 5.95 | 48.56 |
| Av. 20 yrs. | 3.40 | 2.96 | 3.51 | 3.35 | 4.27 | 3.72 | 3.89 | 4.03 | 3.83 | 3.61 | 3.68 | 3.43 | 43.68 |

GRANVILLE, MASS. (Borden Brook Reservoir)—Elevation, 950 feet
Record: January, 1914, to December, 1950

| Year | Jan. | Feb. | Mar. | Apr. | May | June | July | Aug. | Sept. | Oct. | Nov. | Dec. | Annual |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1942 | 3.75 | 2.67 | 6.98 | 1.28 | 5.81 | 4.11 | 5.91 | 2.24 | 6.27 | 4.84 | 5.79 | 6.63 | 56.28 |
| 1943 | 3.60 | 2.07 | 3.76 | 3.15 | 5.63 | 3.73 | 8.53 | 1.31 | 2.39 | 6.47 | 5.53 | 0.99 | 47.16 |
| 1944 | 2.21 | 2.87 | 5.55 | 4.32 | 0.93 | 5.03 | 2.28 | 2.40 | 7.16 | 2.06 | 7.51 | 5.13 | 47.45 |
| 1945 | 4.54 | 4.99 | 2.12 | 4.91 | 8.01 | 7.01 | 7.49 | 4.51 | 6.28 | 2.68 | 4.53 | 5.05 | 62.12 |
| 1946 | 2.96 | 3.14 | 1.67 | 2.29 | 7.79 | 3.33 | 5.11 | 3.36 | 4.66 | 1.75 | 1.07 | 2.94 | 40.07 |
| 1947 | 4.16 | 2.98 | 3.95 | 5.05 | 4.93 | 3.65 | 6.13 | 2.63 | 3.59 | 3.06 | 5.41 | 3.03 | 48.57 |
| 1948 | 3.34 | 2.51 | 4.14 | 3.42 | 5.69 | 7.78 | 2.25 | 2.19 | 3.64 | 2.10 | 5.20 | 10.04 | 52.30 |
| 1949 | 5.86 | 3.69 | 1.97 | 4.70 | 4.67 | 1.23 | 4.44 | 3.91 | 3.40 | 2.56 | 2.07 | 3.88 | 42.38 |
| 1950 | 5.00 | 4.17 | 3.84 | 3.92 | 5.64 | 4.18 | 2.40 | 3.51 | 1.72 | 2.41 | 8.28 | 5.40 | 50.47 |
| Av. 37 yrs. | 3.87 | 3.54 | 4.20 | 3.96 | 4.30 | 4.56 | 4.24 | 4.06 | 4.36 | 3.34 | 4.56 | 4.04 | 49.03 |

GRANVILLE, MASS. (West Granville)—Elevation, 900 feet
Record: July, 1912, to December, 1950

| Year | Jan. | Feb. | Mar. | Apr. | May | June | July | Aug. | Sept. | Oct. | Nov. | Dec. | Annual |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1942 | 3.52 | 2.49 | 7.20 | 1.00 | 5.77 | 4.15 | 6.88 | 2.67 | 4.73 | 3.72 | 7.18 | 7.62 | 56.93 |
| 1943 | 3.12 | 2.08 | 2.96 | 2.58 | 6.85 | 3.70 | 4.59 | 1.37 | 3.32 | 6.81 | 5.68 | 0.22 | 43.28 |
| 1944 | 1.98 | 2.92 | 4.17 | 4.19 | 1.49 | 4.98 | 2.87 | 1.95 | 8.03 | 2.35 | 4.56 | 4.74 | 44.23 |
| 1945 | 3.51 | 2.50 | 1.14 | 5.65 | 8.29 | 6.94 | 7.80 | 3.62 | 4.54 | 2.38 | 5.42 | 4.80 | 56.59 |
| 1946 | 2.84 | 4.02 | 1.24 | 2.46 | 7.59 | 3.10 | 4.82 | 3.04 | 3.99 | 2.43 | 1.01 | 1.51 | 38.05 |
| 1947 | 3.30 | 2.86 | 3.81 | 4.01 | 5.88 | 3.64 | 5.34 | 1.67 | 3.51 | 3.55 | 6.37 | 3.03 | 46.97 |
| 1948 | 2.82 | 2.47 | 3.46 | 3.07 | 5.62 | 7.44 | 3.00 | 2.66 | 0.88 | 2.92 | 4.65 | 8.68 | 47.67 |
| 1949 | 6.68 | 3.05 | 3.22 | 4.09 | 4.62 | 1.32 | 4.51 | 3.58 | 3.06 | 2.77 | 1.78 | 2.75 | 41.43 |
| 1950 | 2.36 | 3.66 | 4.34 | 3.52 | 4.60 | 5.05 | 2.37 | 4.73 | 1.58 | 2.30 | 9.49 | 5.23 | 49.23 |
| Av. 38 yrs. | 3.47 | 3.10 | 3.73 | 3.95 | 4.35 | 4.43 | 4.30 | 4.14 | 4.17 | 3.62 | 4.33 | 3.26 | 46.85 |

GREENFIELD, MASS.—Elevation, 270 feet
Record: April, 1925, to December, 1950

| Year | Jan. | Feb. | Mar. | Apr. | May | June | July | Aug. | Sept. | Oct. | Nov. | Dec. | Annual |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1942 | 3.56 | 2.14 | 6.51 | 1.15 | 5.19 | 3.99 | 5.11 | 4.37 | 5.59 | 4.26 | 4.35 | 6.10 | 52.32 |
| 1943 | 2.44 | 1.49 | 3.14 | 3.97 | 6.66 | 1.78 | 4.66 | 2.88 | 2.90 | 4.73 | 5.76 | 0.45 | 40.86 |
| 1944 | 1.40 | 2.28 | 5.04 | 3.86 | 1.45 | 5.80 | 9.74 | 2.89 | 5.55 | 1.67 | 3.50 | 2.67 | 45.85 |
| 1945 | 2.89 | 3.84 | 2.37 | 6.88 | 7.79 | 7.39 | 5.97 | 3.13 | 3.57 | 2.48 | 3.43 | 4.26 | 54.00 |
| 1946 | 2.99 | 3.35 | 1.31 | 2.17 | 6.54 | 3.55 | 4.65 | 4.29 | 5.07 | 1.69 | 0.82 | 3.90 | 40.33 |
| 1947 | 4.18 | 2.69 | 3.29 | 4.64 | 4.00 | 3.53 | 4.35 | 2.50 | 3.67 | 2.11 | 5.61 | 2.37 | 42.94 |
| 1948 | 2.43 | 2.91 | 3.05 | 3.15 | 6.98 | 6.41 | 2.75 | 2.06 | 1.30 | 1.63 | 5.55 | 3.66 | 41.88 |
| 1949 | 4.61 | 3.19 | 1.23 | 3.55 | 3.42 | 1.32 | 1.91 | 4.25 | 2.70 | 2.51 | 2.02 | 2.47 | 33.18 |
| 1950 | 5.30 | 3.31 | 2.99 | 3.44 | 4.61 | 3.67 | 2.80 | 5.13 | 1.54 | 1.87 | 5.94 | 5.04 | 45.64 |
| Av. 25 yrs. | 3.43 | 2.74 | 3.48 | 3.71 | 4.10 | 3.96 | 4.13 | 3.71 | 4.00 | 2.88 | 3.98 | 3.35 | 43.47 |

GROTON, MASS.—Elevation, 350 feet
Record: July, 1885, to May, 1909
January, 1913, to December, 1950

| Year | Jan. | Feb. | Mar. | Apr. | May | June | July | Aug. | Sept. | Oct. | Nov. | Dec. | Annual |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1942 | 3.87 | 2.66 | 7.40 | 1.50 | 3.63 | 3.09 | 5.79 | 1.95 | 2.53 | 2.62 | 4.56 | 5.49 | 45.09 |
| 1943 | 3.08 | 1.28 | 3.52 | 3.42 | 5.59 | 3.03 | 4.33 | 2.92 | 1.26 | 5.19 | 5.05 | 0.74 | 39.41 |
| 1944 | 1.90 | 2.46 | 4.32 | 4.06 | 0.80 | 8.67 | 2.52 | 0.98 | 6.33 | 2.22 | 4.92 | 3.27 | 42.45 |
| 1945 | 3.11 | 4.30 | 1.79 | 3.81 | 5.39 | 6.15 | 5.60 | 2.63 | 1.51 | 1.98 | 4.82 | 5.25 | 46.34 |
| 1946 | 3.51 | 3.31 | 1.71 | 2.71 | 6.36 | 3.14 | 4.14 | 6.32 | 3.92 | 0.98 | 0.88 | 4.27 | 41.25 |
| 1947 | 3.17 | 2.39 | 3.24 | 4.64 | 2.90 | 4.01 | 3.34 | 1.58 | 3.24 | 0.82 | 4.79 | 3.28 | 37.40 |
| 1948 | 3.76 | 2.42 | 3.00 | 2.59 | 5.50 | 5.37 | 4.61 | 1.87 | 0.63 | 2.10 | 5.90 | 1.80 | 39.55 |
| 1949 | 4.17 | 2.98 | 1.58 | 4.48 | 3.65 | 0.77 | 2.15 | 2.97 | 2.49 | 2.27 | 2.13 | 1.98 | 31.42 |
| 1950 | 4.80 | 3.67 | 3.14 | 2.67 | 1.70 | 1.56 | 2.49 | 2.98 | 1.86 | 2.89 | 5.86 | 3.66 | 37.28 |
| Av. 61 yrs. | 3.56 | 3.37 | 3.79 | 3.60 | 3.48 | 3.60 | 3.56 | 3.58 | 3.75 | 3.22 | 3.73 | 3.44 | 42.68 |

HARDWICK, MASS.—Elevation, 950 feet
Record: May, 1920, to December, 1950

| Year | Jan. | Feb. | Mar. | Apr. | May | June | July | Aug. | Sept. | Oct. | Nov. | Dec. | Annual |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1942 | 3.37 | 1.71 | 5.93 | 0.71 | 2.99 | 5.23 | 5.32 | 1.76 | 3.59 | 3.61 | 5.73 | 4.67 | 44.62 |
| 1943 | 2.58 | 1.42 | 3.07 | 3.32 | 5.62 | 1.47 | 5.96 | 3.05 | 1.30 | 5.08 | 6.39 | 0.67 | 39.93 |
| 1944 | 1.50 | 1.88 | 3.98 | 3.65 | 1.12 | 6.96 | 3.98 | 2.36 | 6.87 | 1.96 | 3.77 | 2.91 | 40.94 |
| 1945 | 2.98 | 3.71 | 1.87 | 6.05 | 5.97 | 7.80 | 7.54 | 3.11 | 1.75 | 2.80 | 3.36 | 4.05 | 50.99 |
| 1946 | 2.30 | 2.61 | 1.41 | 3.65 | 5.22 | 5.74 | 4.22 | 4.60 | 4.07 | 1.00 | 1.35 | 3.17 | 39.34 |
| 1948 | 2.39 | 2.31 | 3.49 | 2.98 | 5.97 | 6.53 | 8.00 | 2.28 | 2.41 | 1.61 | 6.58 | 2.37 | 46.92 |
| 1949 | 4.72 | 2.89 | 1.68 | 2.84 | 4.88 | 0.72 | 3.07 | 3.84 | 2.46 | 2.49 | 1.96 | 3.20 | 34.75 |
| 1950 | 4.63 | 2.85 | 2.38 | 3.43 | 3.65 | 4.75 | 3.48 | 3.56 | 1.15 | 2.05 | 6.20 | 4.33 | 42.46 |
| Av. 29 yrs. | 3.34 | 2.68 | 3.36 | 3.83 | 3.55 | 4.59 | 4.51 | 3.72 | 4.17 | 3.04 | 3.70 | 3.09 | 43.58 |

HARDWICK, MASS. (M.D.W.S.C.)—Elevation, 540 feet
Record: January, 1942, to December, 1950

| Year | Jan. | Feb. | Mar. | Apr. | May | June | July | Aug. | Sept. | Oct. | Nov. | Dec. | Annual |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1942 | 3.99 | 2.14 | 7.33 | 1.00 | 2.54 | 4.33 | 4.14 | 1.96 | 3.73 | 3.43 | 5.57 | 5.19 | 45.35 |
| 1943 | 2.35 | 1.11 | 2.02 | — | 4.75 | 1.62 | 4.58 | 4.19 | 1.49 | 5.29 | 5.80 | 0.76 | — |
| 1944 | 1.37 | 1.91 | 4.09 | 4.69 | 1.45 | 8.25 | 2.44 | 1.84 | 6.43 | — | — | 2.75 | — |
| 1945 | 3.33 | 3.43 | 1.76 | 6.40 | 6.40 | 5.69 | 7.02 | 3.64 | 1.76 | 2.78 | 4.02 | 4.69 | 53.92 |
| 1946 | 2.88 | 3.06 | 1.97 | 2.93 | 6.61 | 4.14 | 3.81 | 4.95 | 3.96 | 1.12 | 1.24 | 3.57 | 40.24 |
| 1947 | 3.19 | 2.29 | 2.83 | 5.50 | 3.50 | 2.79 | 5.13 | 1.89 | 2.50 | 1.58 | 5.96 | 3.23 | 40.39 |
| 1948 | 3.06 | 2.19 | 3.40 | 3.72 | 6.32 | 7.02 | 6.08 | 2.34 | 1.98 | 1.11 | 6.64 | 2.86 | 46.72 |
| 1949 | 4.71 | 3.42 | 1.54 | 3.13 | 5.00 | 0.66 | 3.52 | 5.16 | 2.88 | 2.95 | 2.24 | 3.59 | 38.80 |
| 1950 | 4.81 | 3.87 | 2.64 | 4.22 | 3.77 | 4.20 | 3.39 | 3.59 | 1.70 | 1.88 | 6.09 | 3.75 | 43.91 |
| Av. 6 yrs. | 3.66 | 3.04 | 2.36 | 4.32 | 5.27 | 4.58 | 4.82 | 3.60 | 2.46 | 1.90 | 4.36 | 3.62 | 43.99 |

HAVERHILL, MASS. (City Hall)—Elevation, 125 feet
Record: January, 1900, to December, 1950

| Year | Jan. | Feb. | Mar. | Apr. | May | June | July | Aug. | Sept. | Oct. | Nov. | Dec. | Annual |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1942 | 2.94 | 3.51 | 6.90 | 2.02 | 2.32 | 2.88 | 5.39 | 1.35 | 1.94 | 2.42 | 5.50 | 5.51 | 42.68 |
| 1943 | 2.80 | 1.22 | 3.42 | 2.60 | 4.91 | 1.80 | 6.60 | 3.50 | 0.35 | 5.01 | 4.57 | 0.90 | 37.68 |
| 1944 | 2.67 | 2.67 | 3.80 | 3.39 | 0.96 | 4.45 | 2.54 | 0.75 | 7.91 | 1.64 | 5.97 | 3.20 | 39.95 |
| 1945 | 2.63 | 4.35 | 1.64 | 2.96 | 4.59 | 4.29 | 4.38 | 2.36 | 1.14 | 2.22 | 6.39 | 5.37 | 42.32 |
| 1950 | 4.77 | 3.58 | 4.41 | 2.01 | 1.11 | 1.65 | 2.97 | 3.49 | 2.52 | 4.17 | 5.30 | 3.64 | 39.62 |
| Av. 47 yrs. | 3.16 | 2.92 | 3.65 | 3.47 | 2.78 | 3.39 | 3.76 | 2.84 | 3.28 | 2.88 | 3.33 | 3.37 | 38.83 |

HAVERHILL, MASS. (Kenoza Lake)—Elevation, 119 feet
Record: January, 1895, to June, 1948

| Year | Jan. | Feb. | Mar. | Apr. | May | June | July | Aug. | Sept. | Oct. | Nov. | Dec. | Annual |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1942 | 2.60 | 3.89 | 6.86 | 1.81 | 2.54 | 2.95 | 5.94 | 1.65 | 1.97 | 2.53 | 5.21 | 5.56 | 43.51 |
| 1943 | 2.95 | 1.32 | 2.99 | 2.43 | 5.59 | 1.32 | 6.15 | 2.76 | 0.34 | 5.02 | 4.35 | 0.91 | 36.63 |
| 1944 | 2.29 | 2.74 | 4.41 | 3.45 | 0.95 | 4.74 | 2.89 | 0.87 | 8.15 | 2.27 | 4.81 | 4.20 | 41.77 |
| 1945 | 2.92 | 4.35 | 1.64 | 2.96 | 4.59 | 4.29 | 4.38 | 2.36 | 1.14 | 2.22 | 6.39 | 5.37 | 42.61 |
| 1946 | 3.90 | 2.96 | 1.54 | 2.62 | 5.86 | 2.67 | 1.76 | 7.90 | 0.69 | 3.06 | 0.90 | 3.86 | 37.72 |
| 1947 | 2.68 | 1.36 | 3.73 | 3.76 | 4.20 | 3.55 | 4.38 | 1.83 | 3.18 | 0.32 | 5.43 | 2.37 | 36.79 |
| 1948 | 4.08 | 1.96 | 2.71 | 2.94 | 4.68 | 5.00 | — | — | — | — | — | — | — |
| Av. 53 yrs. | 3.20 | 3.01 | 3.71 | 3.42 | 2.96 | 3.48 | 3.77 | 3.06 | 3.42 | 3.05 | 3.34 | 3.35 | 39.77 |

HEATH, MASS.—Elevation, 1,450 feet
Record: October, 1919, to December, 1950

| Year | Jan. | Feb. | Mar. | Apr. | May | June | July | Aug. | Sept. | Oct. | Nov. | Dec. | Annual |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1942 | 3.12 | 2.79 | 7.15 | 1.84 | 5.21 | 2.28 | 7.40 | 1.63 | 6.08 | 4.94 | 5.62 | 5.73 | 53.79 |
| 1943 | 3.17 | 1.67 | 3.43 | 4.49 | 7.65 | 3.19 | 7.30 | 3.50 | 2.43 | 6.68 | 5.93 | 0.67 | 50.11 |
| 1944 | 1.73 | 2.25 | 4.90 | 4.59 | 1.53 | 7.25 | 4.42 | 1.86 | 5.59 | 1.77 | 4.52 | 4.31 | 44.72 |
| 1945 | 4.34 | 4.81 | 2.14 | 6.74 | 8.29 | 7.11 | 8.10 | 2.58 | 3.56 | 3.57 | 4.07 | 3.84 | 59.15 |
| 1946 | 3.29 | 3.61 | 1.56 | 2.67 | 7.59 | 3.72 | 3.72 | 4.58 | 6.30 | 1.78 | 1.29 | 4.36 | 44.47 |
| 1947 | 4.00 | 2.87 | 5.01 | 4.85 | 4.83 | 4.78 | 3.75 | 5.52 | 3.82 | 1.57 | 5.34 | 3.18 | 49.52 |
| 1948 | 3.19 | 3.74 | 3.61 | 3.99 | 8.56 | 7.22 | 1.27 | 1.57 | 1.27 | 2.18 | 5.13 | 9.02 | 50.75 |
| 1949 | 5.01 | 3.32 | 1.60 | 4.96 | 3.24 | 1.22 | 3.80 | 4.23 | 4.43 | 2.65 | 1.93 | 2.80 | 39.19 |
| 1950 | 4.98 | 5.13 | 3.80 | 3.26 | 4.67 | 3.62 | 3.41 | 4.25 | 2.06 | 2.25 | 6.04 | 4.95 | 48.42 |
| Av. 31 yrs. | 3.55 | 3.17 | 3.81 | 4.07 | 4.25 | 4.64 | 4.28 | 3.77 | 4.44 | 3.28 | 4.42 | 3.55 | 47.23 |

HINGHAM, MASS. (Fulling Mill Station)*—Elevation, 150 feet
Record: January, 1917, to December, 1932 — January, 1934, to December, 1950

| Year | Jan. | Feb. | Mar. | Apr. | May | June | July | Aug. | Sept. | Oct. | Nov. | Dec. | Annual |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1942 | 3.56 | 2.95 | 8.01 | 1.61 | 2.00 | 2.73 | 5.06 | 2.82 | 2.78 | 3.36 | 5.62 | 4.43 | 44.93 |
| 1943 | 3.98 | 1.48 | 2.39 | 3.65 | 5.65 | 2.12 | 3.41 | 1.26 | 1.92 | 4.78 | 3.51 | 1.10 | 35.25 |
| 1944 | 2.34 | 2.01 | 4.28 | 3.16 | 0.37 | 3.78 | 1.22 | 0.75 | 7.98 | 3.55 | 7.41 | 3.59 | 40.44 |
| 1945 | 4.57 | 4.21 | 2.52 | 2.41 | 4.78 | 5.24 | 1.70 | 4.73 | 2.04 | 3.99 | 10.10 | 8.96 | 52.25 |
| 1946 | 3.92 | 3.51 | 1.68 | 2.87 | 5.03 | 3.85 | 0.87 | 10.44 | 2.37 | 0.27 | 1.06 | 4.32 | 40.19 |
| 1947 | 2.85 | 1.41 | 3.60 | 4.81 | 4.38 | 5.10 | 5.17 | 1.97 | 6.33 | 3.08 | 5.65 | 5.14 | 49.49 |
| 1948 | 7.38 | 2.50 | 3.55 | 3.37 | 7.01 | 4.25 | 6.93 | 2.71 | 1.10 | 6.67 | 6.21 | 1.66 | 53.34 |
| 1949 | 3.80 | 3.85 | 2.12 | 4.33 | 4.27 | 0.36 | 3.12 | 2.17 | 3.41 | 1.59 | 3.68 | 2.14 | 34.84 |
| 1950 | 3.80 | 4.37 | 3.50 | 3.33 | 1.46 | 1.99 | 1.64 | 7.27 | 1.90 | 1.89 | 7.40 | 3.89 | 42.44 |
| Av. 33 yrs. | 3.84 | 3.25 | 3.68 | 3.77 | 3.32 | 3.64 | 3.36 | 3.98 | 3.63 | 3.32 | 4.11 | 3.74 | 43.64 |

*Formerly vicinity Accord Pond.

HOLDEN, MASS. (Kendall Reservoir)—Elevation, 1,100 feet
Record: December, 1912, to December, 1950

| Year | Jan. | Feb. | Mar. | Apr. | May | June | July | Aug. | Sept. | Oct. | Nov. | Dec. | Annual |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1942 | 4.23 | 2.11 | 6.42 | 1.16 | 3.73 | 4.35 | 4.96 | 2.54 | 2.53 | 4.07 | 5.23 | 5.55 | 46.88 |
| 1943 | 2.62 | 1.65 | 3.17 | 3.66 | 5.67 | 2.37 | 4.45 | 1.10 | 0.75 | 5.56 | 5.34 | 0.73 | 37.07 |
| 1944 | 1.40 | 2.12 | 4.08 | 4.16 | 1.26 | 6.75 | 0.92 | 0.96 | 6.92 | 2.15 | 4.75 | 3.46 | 38.93 |
| 1945 | 2.82 | 3.85 | 2.23 | 4.81 | 5.28 | 7.30 | 5.00 | 3.72 | 2.42 | 2.22 | 5.19 | 5.13 | 49.97 |
| 1946 | 3.34 | 2.70 | 1.37 | 2.23 | 6.20 | 3.16 | 4.60 | 6.76 | 6.71 | 1.12 | 1.63 | 3.23 | 43.05 |
| 1947 | 3.33 | 2.23 | 2.87 | 5.23 | 3.02 | 2.84 | 4.43 | 1.28 | 2.72 | 1.27 | 5.89 | 2.38 | 37.49 |
| 1948 | 3.03 | 1.83 | 3.39 | 2.60 | 7.31 | 6.91 | 6.21 | 2.03 | 1.03 | 3.23 | 6.90 | 2.66 | 47.13 |
| 1949 | 3.61 | 2.75 | 1.35 | 4.04 | 3.63 | 0.60 | 2.13 | 3.59 | 2.32 | 2.11 | 2.43 | 3.15 | 31.71 |
| 1950 | 4.18 | 3.35 | 3.59 | 3.77 | 3.06 | 2.82 | 3.28 | 4.02 | 1.57 | 2.57 | 6.07 | 4.21 | 42.49 |
| Av. 38 yrs. | 3.49 | 3.11 | 3.75 | 3.71 | 3.70 | 4.14 | 3.97 | 3.76 | 4.14 | 3.34 | 4.18 | 3.44 | 44.73 |

HOLDEN, MASS. (Jefferson Station)—Elevation, 820 feet
Record: January, 1897, to December, 1950

| Year | Jan. | Feb. | Mar. | Apr. | May | June | July | Aug. | Sept. | Oct. | Nov. | Dec. | Annual |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1942 | 4.98 | 3.22 | 8.52 | 1.70 | 4.63 | 5.02 | 5.19 | 2.14 | 2.68 | 3.43 | 5.54 | 6.81 | 53.86 |
| 1943 | 4.41 | 2.17 | 4.11 | 4.36 | 6.19 | 2.07 | 4.03 | 2.06 | 0.83 | 5.84 | 5.57 | 0.76 | 42.40 |
| 1944 | 2.29 | 2.74 | 4.41 | 3.45 | 0.95 | 4.74 | 2.89 | 0.87 | 8.15 | 2.27 | 4.81 | 4.20 | 41.77 |
| 1945 | 5.20 | 4.32 | 2.27 | 4.66 | 5.48 | 5.75 | 5.77 | 3.35 | 2.84 | 2.36 | 5.50 | 6.56 | 54.06 |
| 1946 | 3.94 | 3.84 | 1.76 | 2.63 | 6.16 | 3.09 | 4.53 | 7.18 | 4.45 | 1.19 | 1.79 | 3.27 | 43.83 |
| 1947 | 3.77 | 2.96 | 4.00 | 5.40 | 3.72 | 3.32 | 4.29 | 1.95 | 3.82 | 1.30 | 5.93 | 3.17 | 43.63 |
| 1948 | 4.02 | 2.93 | 3.94 | 2.45 | 7.42 | 6.76 | 6.57 | 1.93 | 0.96 | 3.23 | 7.31 | 2.84 | 50.36 |
| 1949 | 4.31 | 3.64 | 1.67 | 4.96 | 3.78 | 0.62 | 2.65 | 3.95 | 2.35 | 2.26 | 2.57 | 3.51 | 36.27 |
| 1950 | 3.86 | 4.21 | 4.04 | 3.67 | 2.57 | 3.01 | 3.24 | 4.65 | 2.16 | 2.90 | 6.76 | 3.84 | 44.91 |
| Av. 54 yrs. | 4.13 | 3.92 | 4.32 | 4.00 | 3.60 | 4.04 | 4.12 | 4.06 | 4.02 | 3.28 | 4.07 | 4.04 | 47.60 |

HOLDEN, MASS. (Vicinity Holden Reservoirs)—Elevation, 750 feet
Record: January, 1885, to February, 1887—May, 1887, to December, 1950

| Year | Jan. | Feb. | Mar. | Apr. | May | June | July | Aug. | Sept. | Oct. | Nov. | Dec. | Annual |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1942 | 4.36 | 1.83 | 7.31 | 1.06 | 3.33 | 3.97 | 5.01 | 2.87 | 2.90 | 3.81 | 5.30 | 4.04 | 45.79 |
| 1943 | 3.09 | 1.64 | 3.55 | 3.99 | 5.20 | 3.53 | 5.15 | 1.80 | 0.73 | 5.36 | 5.26 | 0.82 | 40.12 |
| 1944 | 1.40 | 2.34 | 4.38 | 4.28 | 1.00 | 7.04 | 0.55 | 1.19 | 5.54 | 1.87 | 5.11 | 3.79 | 38.49 |
| 1945 | 2.93 | 3.73 | 2.26 | 4.61 | 5.85 | 7.81 | 4.31 | 3.86 | 1.72 | 1.91 | 5.57 | 5.28 | 49.84 |
| 1946 | 3.48 | 3.38 | 1.59 | 2.31 | 6.10 | 3.14 | 3.80 | 6.49 | 4.49 | 0.82 | 1.59 | 3.57 | 40.76 |
| 1947 | 3.28 | 2.30 | 3.26 | 5.28 | 3.02 | 2.84 | 4.43 | 1.28 | 2.72 | 1.27 | 5.89 | 2.38 | 37.95 |
| 1948 | 3.60 | 2.36 | 3.90 | 3.52 | 6.85 | 6.24 | 5.32 | 1.97 | 1.88 | 2.99 | 6.46 | 2.78 | 47.87 |
| 1949 | 4.19 | 3.19 | 1.50 | 4.37 | 3.92 | 0.73 | 1.36 | 3.15 | 2.31 | 1.93 | 2.85 | 3.13 | 32.63 |
| 1950 | 4.37 | 4.09 | 3.85 | 3.99 | 3.37 | 2.78 | 2.85 | 4.08 | 2.18 | 2.45 | 6.37 | 4.06 | 44.44 |
| Av. 65 yrs. | 3.71 | 3.41 | 4.01 | 3.70 | 3.67 | 3.74 | 4.01 | 3.79 | 3.96 | 3.47 | 4.09 | 3.62 | 45.18 |

HOLYOKE, MASS. (Whiting St. Reservoir)—Elevation, 370 feet
Record: January, 1907, to December, 1950

| Year | Jan. | Feb. | Mar. | Apr. | May | June | July | Aug. | Sept. | Oct. | Nov. | Dec. | Annual |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1942 | 3.99 | 1.85 | 6.94 | 1.02 | 4.46 | 3.69 | 4.74 | 1.66 | 4.92 | 4.45 | 5.92 | 6.88 | 50.52 |
| 1943 | 4.05 | 3.25 | 4.06 | 3.57 | 6.35 | 3.07 | 7.22 | 1.78 | 2.28 | 5.87 | 5.32 | 0.51 | 47.33 |
| 1944 | 1.77 | 2.34 | 4.91 | 4.34 | 0.81 | 4.72 | 2.93 | 2.23 | 4.89 | 2.01 | 4.70 | 3.27 | 38.92 |
| 1945 | 3.41 | 4.29 | 1.93 | 5.83 | 7.04 | 6.77 | 6.26 | 3.84 | 2.92 | 2.30 | 4.08 | 5.19 | 53.86 |
| 1946 | 3.05 | 3.92 | 1.54 | 2.34 | 7.11 | 2.65 | 6.60 | 4.46 | 4.67 | 1.50 | 0.71 | 3.33 | 41.88 |
| 1947 | 3.48 | 2.95 | 2.59 | 4.90 | 5.18 | 3.31 | 4.57 | 2.67 | 4.30 | 2.57 | 6.20 | 2.75 | 45.47 |
| 1948 | 3.09 | 2.45 | 3.09 | 2.97 | 5.20 | 5.10 | 3.20 | 3.74 | 1.53 | 1.11 | 5.38 | 3.81 | 40.67 |
| 1949 | 5.27 | 3.33 | 1.67 | 3.38 | 4.70 | 0.42 | 4.88 | 4.65 | 3.29 | 3.13 | 2.11 | 2.40 | 39.23 |
| 1950 | 4.03 | 4.57 | 3.28 | 3.49 | 4.30 | 4.64 | 2.06 | 3.37 | 1.82 | 1.91 | 5.13 | 4.68 | 43.28 |
| Av. 44 yrs. | 3.56 | 3.26 | 3.51 | 3.76 | 3.98 | 4.08 | 3.98 | 4.01 | 3.85 | 3.14 | 3.82 | 3.42 | 44.37 |

HOLYOKE, MASS. (High Service Reservoir)—Elevation, 450 feet
Record: January, 1907, to December, 1950

| Year | Jan. | Feb. | Mar. | Apr. | May | June | July | Aug. | Sept. | Oct. | Nov. | Dec. | Annual |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1942 | 3.90 | 1.88 | 6.60 | 1.07 | 4.71 | 4.12 | 5.54 | 2.20 | 5.80 | 4.38 | 5.54 | 6.86 | 52.60 |
| 1943 | 3.67 | 2.75 | 4.16 | 3.60 | 6.00 | 3.31 | 5.67 | 0.86 | 1.92 | 5.53 | 5.51 | 0.69 | 43.67 |
| 1944 | 1.73 | 2.94 | 5.34 | 4.69 | 1.04 | 4.72 | 2.23 | 2.26 | 6.64 | 2.08 | 4.67 | 3.43 | 41.77 |
| 1945 | 2.66 | 4.94 | 2.32 | 5.68 | 7.46 | 6.52 | 6.30 | 3.77 | 3.09 | 2.43 | 4.40 | 4.48 | 54.05 |
| 1946 | 2.86 | 4.17 | 1.89 | 2.20 | 7.47 | 3.67 | 6.56 | 4.18 | 4.31 | 1.49 | 0.93 | 2.47 | 42.20 |
| 1947 | 3.17 | 1.13 | 2.78 | 4.97 | 5.58 | 3.27 | 3.79 | 2.83 | 4.03 | 2.96 | 6.21 | 2.49 | 43.01 |
| 1948 | 2.61 | 2.50 | 3.20 | 3.34 | 5.45 | 6.77 | 3.45 | 4.29 | 1.42 | 1.17 | 4.85 | 4.66 | 43.71 |
| 1949 | 4.89 | 2.94 | 1.41 | 3.60 | 5.07 | 0.12 | 3.26 | 5.90 | 3.48 | 2.44 | 1.97 | 2.62 | 37.70 |
| 1950 | 4.62 | 3.85 | 4.32 | 3.67 | 5.70 | 3.36 | 3.47 | 4.10 | 1.33 | 1.20 | 5.66 | 3.62 | 44.90 |
| Av. 44 yrs. | 3.27 | 3.06 | 3.38 | 3.66 | 4.00 | 4.14 | 3.98 | 3.95 | 3.60 | 3.14 | 3.69 | 3.15 | 43.02 |

HOLYOKE, MASS. (Ashley Pond)—Elevation, 330 feet
Record: January, 1907, to December, 1950

| Year | Jan. | Feb. | Mar. | Apr. | May | June | July | Aug. | Sept. | Oct. | Nov. | Dec. | Annual |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1942 | 3.61 | 1.78 | 5.92 | 1.08 | 4.61 | 4.33 | 5.58 | 2.26 | 5.42 | 4.61 | 4.78 | 6.45 | 50.43 |
| 1943 | 3.47 | 3.23 | 3.62 | 3.55 | 6.42 | 3.35 | 6.38 | 0.83 | 1.85 | 5.87 | 5.22 | 0.57 | 44.36 |
| 1944 | 1.76 | 2.05 | 4.52 | 4.80 | 1.13 | 4.71 | 2.07 | 2.57 | 7.82 | 2.16 | 4.10 | 3.03 | 40.72 |
| 1945 | 3.09 | 4.11 | 2.77 | 6.56 | 7.69 | 6.67 | 6.42 | 3.64 | 3.51 | 2.49 | 4.11 | 4.32 | 55.38 |
| 1946 | 2.79 | 3.29 | 1.73 | 2.18 | 7.33 | 3.50 | 6.75 | 3.66 | 4.82 | 1.39 | 0.84 | 2.40 | 40.68 |
| 1947 | 2.89 | 2.54 | 2.92 | 3.59 | 4.21 | 2.92 | 3.60 | 2.95 | 4.86 | 3.02 | 6.87 | 2.64 | 43.01 |
| 1948 | 2.47 | 2.32 | 3.37 | 2.73 | 5.35 | 6.97 | 3.96 | 5.63 | 1.33 | 1.26 | 5.67 | 4.42 | 45.48 |
| 1949 | 4.85 | 3.24 | 1.58 | 3.78 | 4.86 | 0.48 | 3.16 | 7.96 | 2.91 | 2.63 | 2.11 | 2.59 | 40.15 |
| 1950 | 4.57 | 4.27 | 2.54 | 3.99 | 4.43 | 4.97 | 2.69 | 3.68 | 1.53 | 1.65 | 5.59 | 5.28 | 45.19 |
| Av. 44 yrs. | 3.33 | 3.10 | 3.33 | 3.58 | 3.85 | 4.22 | 4.06 | 4.19 | 3.83 | 3.26 | 3.77 | 3.24 | 43.76 |

HOLYOKE, MASS. (Holyoke Water Power Co.)—Elevation, 90 feet
Record: July, 1897, to December, 1950

| Year | Jan. | Feb. | Mar. | Apr. | May | June | July | Aug. | Sept. | Oct. | Nov. | Dec. | Annual |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1942 | 2.75 | 3.10 | 6.59 | 0.88 | 4.26 | 4.60 | 4.95 | 2.24 | 4.39 | 3.38 | 5.87 | 6.39 | 49.40 |
| 1943 | 3.61 | 1.69 | 3.88 | 2.80 | 6.00 | 3.33 | 5.14 | 1.52 | 1.17 | 5.29 | 4.95 | 0.58 | 39.96 |
| 1944 | 1.55 | 2.23 | 4.89 | 4.45 | 1.18 | 5.08 | 2.13 | 3.04 | 6.25 | 1.99 | 4.95 | 3.41 | 40.05 |
| 1945 | 3.67 | 3.64 | 2.14 | 5.54 | 6.88 | 6.53 | 5.45 | 3.33 | 2.82 | 2.29 | 4.07 | 5.15 | 51.51 |
| 1946 | 3.03 | 3.24 | 1.85 | 1.82 | 6.44 | 3.53 | 5.75 | 3.68 | 3.45 | 1.71 | 0.63 | 3.16 | 38.29 |
| 1947 | 3.10 | 2.77 | 2.64 | 4.10 | 5.01 | 3.07 | 4.08 | 2.10 | 3.27 | 2.75 | 6.43 | 2.90 | 42.22 |
| 1948 | 3.07 | 2.20 | 3.19 | 3.03 | 5.15 | 5.94 | 4.50 | 4.57 | 0.89 | 1.62 | 5.48 | 2.82 | 42.46 |
| 1949 | 4.95 | 2.76 | 3.07 | 3.48 | 4.34 | 0.55 | 3.22 | 3.59 | 4.09 | 2.45 | 1.92 | 3.17 | 37.59 |
| 1950 | 4.24 | 4.16 | 3.31 | 3.58 | 3.85 | 4.73 | 1.81 | 3.29 | 1.81 | 1.81 | 5.36 | 4.63 | 42.58 |
| Av. 53 yrs. | 3.60 | 3.36 | 3.84 | 3.70 | 3.78 | 3.92 | 3.91 | 3.94 | 3.63 | 3.19 | 3.48 | 3.53 | 43.88 |

HOPKINTON, MASS. (Met. W. W.)
Record: July, 1944, to December, 1950

| Year | Jan. | Feb. | Mar. | Apr. | May | June | July | Aug. | Sept. | Oct. | Nov. | Dec. | Annual |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1944 | | | | | | | 1.82 | 1.37 | 6.62 | 2.08 | 6.77 | 3.60 | |
| 1945 | 3.01 | 5.28 | 2.36 | 3.10 | 5.16 | 6.18 | 2.66 | 4.89 | 1.84 | 2.30 | 7.02 | 6.28 | 50.08 |
| 1946 | 3.68 | 3.39 | 1.69 | 2.50 | 5.01 | 2.86 | 1.86 | 8.69 | 3.76 | 0.57 | 1.31 | 4.29 | 39.61 |
| 1947 | 2.81 | 2.29 | 3.40 | 4.62 | 4.01 | 3.33 | 4.78 | 1.87 | 3.72 | 1.16 | 5.59 | 4.40 | 41.98 |
| 1948 | 4.00 | 2.07 | 3.18 | 3.02 | 5.51 | 4.56 | 4.65 | 1.40 | 0.89 | 3.03 | 6.23 | 1.93 | 40.47 |
| 1949 | 3.63 | 3.13 | 1.40 | 3.73 | 3.98 | 0.48 | 1.72 | 4.98 | 3.30 | 1.56 | 2.56 | 2.38 | 32.85 |
| 1950 | 4.42 | 4.22 | 3.59 | 3.20 | 1.58 | 1.87 | 2.87 | 6.35 | 1.46 | 2.57 | 5.99 | 5.80 | 41.92 |
| Av. 6 yrs. | 3.59 | 3.40 | 2.60 | 3.36 | 4.21 | 3.21 | 3.09 | 4.70 | 2.50 | 1.86 | 4.78 | 3.85 | 41.15 |

HOUSATONIC RIVER WATERSHED, MASS.
Record: January, 1913, to December, 1950

| Year | Jan. | Feb. | Mar. | Apr. | May | June | July | Aug. | Sept. | Oct. | Nov. | Dec. | Annual |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1942 | 2.98 | 1.88 | 6.13 | 1.64 | 4.22 | 3.69 | 6.55 | 2.61 | 5.80 | 4.62 | 5.55 | 4.88 | 50.35 |
| 1943 | 3.12 | 1.53 | 3.04 | 3.60 | 6.54 | 3.72 | 5.39 | 3.14 | 1.44 | 4.36 | 4.95 | 0.60 | 41.43 |
| 1944 | 1.57 | 2.05 | 4.01 | 3.93 | 1.98 | 5.77 | 5.86 | 2.34 | 5.13 | 2.32 | 4.33 | 3.02 | 42.31 |
| 1945 | 3.57 | 3.31 | 2.18 | 6.32 | 6.51 | 7.08 | 10.05 | 3.92 | 3.42 | 2.86 | 4.88 | 3.38 | 57.48 |
| 1946 | 2.33 | 3.34 | 1.22 | 2.23 | 6.48 | 4.12 | 5.00 | 2.99 | 5.91 | 2.43 | 1.21 | 3.03 | 40.29 |
| 1947 | 3.72 | 2.57 | 4.10 | 4.55 | 4.33 | 3.76 | 4.20 | 2.50 | 3.31 | 2.90 | 4.77 | 2.63 | 43.34 |
| 1948 | 2.48 | 2.43 | 4.23 | 3.46 | 7.01 | 8.38 | 2.84 | 2.73 | 1.62 | 1.87 | 4.59 | 10.89 | 52.53 |
| 1949 | 4.60 | 3.24 | 1.76 | 3.62 | 4.22 | 2.62 | 5.15 | 3.39 | 4.01 | 2.52 | 1.78 | 3.28 | 40.15 |
| 1950 | 4.35 | 3.54 | 2.51 | 2.89 | 3.48 | 4.30 | 4.18 | 3.43 | 1.74 | 1.79 | 7.27 | 3.44 | 42.92 |
| Av. 38 yrs. | 3.12 | 2.74 | 3.37 | 3.49 | 3.76 | 4.18 | 4.59 | 4.00 | 3.98 | 3.07 | 3.78 | 3.15 | 43.23 |

HUBBARDSTON, MASS.—Elevation, 1,030 feet
Record: August, 1919, to December, 1950

| Year | Jan. | Feb. | Mar. | Apr. | May | June | July | Aug. | Sept. | Oct. | Nov. | Dec. | Annual |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1942 | 3.04 | 1.73 | 6.64 | 1.01 | 3.30 | 4.52 | 6.36 | 1.45 | 2.75 | 3.52 | 4.35 | 3.30 | 41.97 |
| 1943 | 2.59 | 1.36 | 2.46 | 3.54 | 4.77 | 1.80 | 4.62 | 3.58 | 1.20 | 5.01 | 5.59 | 0.76 | 37.28 |
| 1944 | 1.16 | 1.85 | 4.03 | 3.63 | 1.44 | 11.82 | 2.46 | 1.12 | 7.43 | 1.58 | 2.73 | 3.01 | 42.26 |
| 1945 | 2.29 | 3.93 | 1.44 | 4.69 | 4.86 | 6.18 | 6.18 | 3.76 | 1.41 | 2.73 | 3.43 | 3.45 | 44.35 |
| 1946 | 2.23 | 3.11 | 1.75 | 1.98 | 5.18 | 4.11 | 3.66 | 4.35 | 6.37 | 1.02 | 1.36 | 2.33 | 37.45 |
| 1947 | 2.77 | 1.96 | 3.16 | 4.25 | 2.89 | 2.94 | 5.94 | 2.14 | 2.25 | 1.07 | 5.57 | 2.13 | 37.07 |
| 1948 | 2.81 | 1.97 | 2.94 | 2.74 | 6.33 | 5.52 | 4.72 | 1.37 | 1.41 | 1.84 | 6.44 | 2.61 | 40.70 |
| 1949 | 4.26 | 2.93 | 1.25 | 3.25 | 4.49 | 0.46 | 2.18 | 3.51 | 2.87 | 2.54 | 1.79 | 2.83 | 32.36 |
| 1950 | 3.95 | 2.37 | 2.12 | 3.32 | 2.48 | 3.61 | 2.95 | 3.14 | 1.46 | 2.54 | 6.71 | 1.97 | 36.62 |
| Av. 31 yrs. | 2.99 | 2.51 | 3.42 | 3.64 | 3.56 | 4.42 | 4.28 | 3.35 | 4.27 | 3.05 | 3.95 | 2.90 | 42.34 |

HUBBARDSTON, MASS. (Williamsville)—Elevation, 830 feet
Record: November, 1923, to December, 1950

| Year | Jan. | Feb. | Mar. | Apr. | May | June | July | Aug. | Sept. | Oct. | Nov. | Dec. | Annual |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1942 | 3.71 | 2.06 | 6.72 | 0.94 | 3.25 | 5.63 | 6.43 | 1.95 | 3.11 | 3.90 | 4.67 | 4.80 | 47.17 |
| 1943 | 3.28 | 1.68 | 2.89 | 3.59 | 5.65 | 2.24 | 4.63 | 3.70 | 1.12 | 5.28 | 6.38 | 0.61 | 41.05 |
| 1944 | 1.11 | 2.30 | 4.51 | 4.15 | 1.45 | 9.08 | 2.59 | 0.79 | 7.48 | 1.74 | 3.43 | 3.16 | 41.79 |
| 1945 | 3.26 | 4.40 | 1.72 | 5.38 | 5.87 | 6.62 | 6.79 | 4.64 | 1.24 | 2.51 | 3.57 | 4.27 | 50.27 |
| 1946 | 2.88 | 3.53 | 2.17 | 2.39 | 6.01 | 5.35 | 4.71 | 4.56 | 7.98 | 1.00 | 1.13 | 3.49 | 45.20 |
| 1947 | 3.00 | 2.46 | 3.11 | 4.54 | 3.31 | 3.05 | 6.78 | 2.30 | 2.19 | 0.95 | 5.43 | 2.90 | 40.02 |
| 1948 | 3.06 | 2.07 | 3.57 | 3.49 | 6.78 | 6.24 | 3.49 | 1.27 | 1.76 | 1.57 | 6.79 | 2.86 | 42.95 |
| 1949 | 4.79 | 3.43 | 1.16 | 3.09 | 4.74 | 0.70 | 2.35 | 3.26 | 2.60 | 2.47 | 1.94 | 2.85 | 33.38 |
| 1950 | 4.26 | 3.29 | 2.41 | 3.08 | 3.31 | 3.76 | 2.98 | 3.03 | 1.70 | 1.59 | 6.75 | 3.47 | 39.63 |
| Av. 27 yrs. | 3.43 | 2.82 | 3.44 | 3.63 | 3.82 | 4.23 | 4.24 | 3.44 | 4.33 | 2.96 | 3.89 | 3.10 | 43.33 |

HUNTINGTON, MASS. (Knightville)—Elevation, 500 feet
Record: October, 1919, to December, 1950

| Year | Jan. | Feb. | Mar. | Apr. | May | June | July | Aug. | Sept. | Oct. | Nov. | Dec. | Annual |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1942 | 3.58 | 2.29 | 6.45 | 1.31 | 4.96 | 3.62 | 5.42 | 2.25 | 5.68 | 4.79 | 6.36 | 5.87 | 52.58 |
| 1943 | 3.18 | 1.42 | 3.49 | 2.85 | 6.91 | 2.98 | 7.32 | 2.32 | 2.43 | 6.87 | 5.65 | 0.45 | 45.87 |
| 1944 | 1.31 | 1.39 | 3.32 | 4.35 | 1.50 | 5.95 | 3.80 | 1.14 | 6.21 | 2.08 | 5.53 | 3.78 | 40.36 |
| 1945 | 3.70 | 3.87 | 2.01 | 5.48 | 7.86 | 6.60 | 7.78 | 3.25 | 5.31 | 2.58 | 4.06 | 4.27 | 56.77 |
| 1946 | 2.68 | 3.13 | 0.99 | 1.99 | 6.66 | 2.80 | 4.67 | 2.28 | 5.48 | 1.51 | 0.93 | 3.31 | 36.43 |
| 1947 | 3.28 | 2.42 | 3.25 | 4.52 | 4.54 | 3.46 | 4.18 | 3.49 | 2.99 | 3.89 | 6.26 | 2.58 | 44.86 |
| 1948 | 2.60 | 2.44 | 2.72 | 2.85 | 5.55 | 8.13 | 1.99 | 3.68 | 2.24 | 1.73 | 4.64 | 10.36 | 48.93 |
| 1949 | 5.00 | 3.55 | 1.19 | 4.48 | 4.60 | 0.72 | 3.90 | 3.76 | 3.55 | 2.51 | 1.77 | 2.38 | 37.41 |
| 1950 | 4.80 | 3.51 | 3.18 | 3.44 | 4.57 | 2.74 | 2.59 | 3.20 | 1.46 | 2.49 | 7.22 | 5.13 | 44.33 |
| Av. 31 yrs. | 3.33 | 2.75 | 3.54 | 3.77 | 4.03 | 4.36 | 4.08 | 3.72 | 4.30 | 3.23 | 4.33 | 3.45 | 44.89 |

HUNTINGTON, MASS. (Knightville Dam)—Elevation, 620 feet
Record: July, 1940, to December, 1950

| Year | Jan. | Feb. | Mar. | Apr. | May | June | July | Aug. | Sept. | Oct. | Nov. | Dec. | Annual |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1940 | | | | | | | 1.74 | 1.57 | 1.93 | 1.19 | 6.02 | 2.61 | |
| 1941 | 2.94 | 2.76 | 2.18 | 0.82 | 2.04 | 4.29 | 4.89 | 2.45 | 2.07 | 2.12 | 3.83 | 4.23 | 34.62 |
| 1942 | 3.35 | 2.48 | 7.61 | 1.60 | 4.60 | 4.60 | 3.63 | 5.06 | 1.93 | 4.96 | 2.81 | 6.96 | 49.59 |
| 1943 | 3.55 | 1.70 | 3.68 | 3.67 | 5.40 | 2.36 | 7.33 | 2.27 | 2.27 | 6.32 | 4.70 | 0.65 | 43.90 |
| 1944 | 1.63 | 2.17 | 4.67 | 3.71 | 1.45 | 4.98 | 3.27 | 1.15 | 5.58 | 1.61 | 5.23 | 3.49 | 38.94 |
| 1945 | 3.35 | 3.46 | 1.96 | 4.89 | 6.73 | 5.48 | 7.27 | 2.71 | 4.65 | 2.17 | 3.21 | 3.92 | 49.80 |
| 1946 | 2.37 | 2.88 | 1.28 | 1.90 | 5.74 | 2.12 | 3.84 | 1.95 | 5.01 | 1.22 | 0.81 | 3.03 | 32.15 |
| 1947 | 3.38 | 1.88 | 3.80 | 4.47 | 3.71 | 2.68 | 3.37 | 3.29 | 2.76 | 3.47 | 5.84 | 2.63 | 41.28 |
| 1948 | 2.30 | 2.28 | 2.84 | 2.87 | 5.25 | 6.23 | 1.86 | 3.47 | 1.42 | 1.90 | 3.65 | 6.21 | 40.38 |
| 1949 | 3.75 | 2.52 | 2.65 | 3.78 | 4.04 | 0.57 | 3.30 | 3.47 | 2.57 | 2.05 | 1.23 | 2.25 | 32.18 |
| 1950 | *4.80 | *3.50 | 3.01 | 2.90 | 4.55 | 2.52 | 1.82 | 2.75 | 1.38 | 2.25 | 7.18 | 4.86 | 41.52 |
| Av. 10 yrs. | 3.14 | 2.57 | 3.37 | 3.06 | 4.35 | 3.58 | 4.06 | 2.86 | 2.96 | 2.81 | 3.85 | 3.82 | 40.43 |

*Estimated.

IPSWICH RIVER WATERSHED, MASS.
Record: January, 1911, to December, 1950

| Year | Jan. | Feb. | Mar. | Apr. | May | June | July | Aug. | Sept. | Oct. | Nov. | Dec. | Annual |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1942 | 3.88 | 3.65 | 6.71 | 1.65 | 2.62 | 3.46 | 5.32 | 2.09 | 1.92 | 3.25 | 4.70 | 5.06 | 44.31 |
| 1943 | 3.22 | 1.16 | 3.29 | 2.74 | 4.99 | 1.73 | 4.99 | 1.78 | 0.91 | 5.04 | 4.11 | 0.90 | 34.86 |
| 1944 | 2.92 | 2.27 | 3.77 | 3.34 | 0.76 | 5.10 | 2.77 | 2.09 | 6.48 | 2.13 | 6.07 | 3.62 | 41.32 |
| 1945 | 2.95 | 4.20 | 1.87 | 2.87 | 4.45 | 6.66 | 3.77 | 2.99 | 1.41 | 2.37 | 7.57 | 6.08 | 47.19 |
| 1946 | 4.07 | 2.98 | 1.47 | 2.84 | 5.11 | 3.19 | 1.43 | 8.58 | 2.12 | 1.11 | 1.08 | 4.04 | 38.02 |
| 1947 | 2.71 | 1.29 | 3.16 | 4.69 | 3.31 | 2.46 | 4.83 | 1.67 | 2.77 | 0.48 | 5.89 | 3.70 | 36.96 |
| 1948 | 4.90 | 2.20 | 2.61 | 2.77 | 5.04 | 5.67 | 4.03 | 1.15 | 0.57 | 3.28 | 5.49 | 1.47 | 39.18 |
| 1949 | 3.60 | 3.26 | 1.44 | 3.94 | 3.62 | 0.91 | 1.65 | 4.39 | 5.36 | 1.97 | 3.15 | 1.82 | 35.11 |
| 1950 | 4.48 | 3.06 | 3.45 | 1.95 | 1.55 | 1.28 | 2.07 | 4.06 | 1.24 | 2.94 | 6.25 | 3.79 | 36.12 |
| Av. 40 yrs. | 3.45 | 2.96 | 3.44 | 3.57 | 3.05 | 3.51 | 3.52 | 3.29 | 3.39 | 2.91 | 3.69 | 3.44 | 40.22 |

IPSWICH, MASS. (Willowdale)—Elevation, 30 feet
Record: May, 1911, to December, 1950

| Year | Jan. | Feb. | Mar. | Apr. | May | June | July | Aug. | Sept. | Oct. | Nov. | Dec. | Annual |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1942 | 4.39 | 4.14 | 7.36 | 1.87 | 2.46 | 4.39 | 6.53 | 2.18 | 2.32 | 3.02 | 5.05 | 5.00 | 48.71 |
| 1943 | 3.57 | 1.48 | 3.86 | 3.19 | 4.93 | 1.67 | 4.69 | 1.76 | 1.41 | 5.60 | 4.19 | 0.91 | 37.26 |
| 1944 | 3.02 | 2.49 | 4.08 | 3.63 | 1.13 | 5.20 | 3.26 | 1.16 | 6.56 | 2.09 | 6.30 | 3.96 | 42.88 |
| 1945 | 3.77 | 5.69 | 1.87 | 3.16 | 5.17 | 7.11 | 5.14 | 2.67 | 1.54 | 2.42 | 8.06 | 6.17 | 52.77 |
| 1946 | 4.38 | 3.23 | 1.42 | 3.20 | 5.74 | 2.97 | 1.69 | 9.44 | 2.23 | 0.84 | 1.04 | 4.58 | 40.76 |
| 1947 | 2.95 | 1.40 | 3.34 | 5.16 | 3.21 | 2.69 | 3.77 | 1.74 | 2.84 | 0.61 | 6.01 | 3.97 | 37.69 |
| 1948 | 5.67 | 2.77 | 2.87 | 3.09 | 5.01 | 6.27 | 4.54 | 0.89 | 0.71 | 2.98 | 5.54 | 1.42 | 41.76 |
| 1949 | 3.37 | 3.23 | 1.30 | 3.86 | 3.66 | 0.56 | 1.84 | 4.48 | 4.68 | 1.99 | 3.38 | 1.76 | 34.61 |
| 1950 | 4.59 | 3.12 | 3.02 | 1.52 | 1.61 | 1.22 | 2.20 | 4.15 | 1.37 | 2.05 | 7.13 | 4.04 | 36.02 |
| Av. 39 yrs. | 3.97 | 3.55 | 3.79 | 3.78 | 3.23 | 3.64 | 3.49 | 3.19 | 3.54 | 2.93 | 3.89 | 3.69 | 42.69 |

LAKEVILLE, MASS. (Assawompsett Pond)—Elevation, 60 feet
Record: January, 1894, to December, 1950

| Year | Jan. | Feb. | Mar. | Apr. | May | June | July | Aug. | Sept. | Oct. | Nov. | Dec. | Annual |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1942 | 4.24 | 3.00 | 7.97 | 1.30 | 1.31 | 3.03 | 3.42 | 5.48 | 2.30 | 4.29 | 5.87 | 4.08 | 46.79 |
| 1943 | 3.68 | 1.78 | 3.29 | 4.10 | 4.60 | 1.41 | 5.81 | 2.40 | 1.64 | 4.13 | 2.83 | 1.29 | 34.96 |
| 1944 | 2.34 | 1.94 | 4.86 | 4.12 | 0.44 | 3.14 | 1.27 | 0.90 | 6.89 | 2.04 | 8.45 | 3.69 | 40.08 |
| 1945 | 4.05 | 3.64 | 2.19 | 2.58 | 4.99 | 3.75 | 1.84 | 2.38 | 1.55 | 3.82 | 9.85 | 7.91 | 48.55 |
| 1946 | 3.19 | 2.29 | 1.52 | 2.95 | 4.94 | 4.11 | 1.40 | 13.70 | 3.04 | 0.75 | 1.13 | 3.25 | 42.27 |
| 1947 | 2.71 | 1.48 | 2.54 | 6.41 | 4.12 | 3.95 | 4.69 | 1.16 | 2.23 | 2.59 | 4.49 | 3.43 | 39.80 |
| 1948 | 5.77 | 1.64 | 3.43 | 4.10 | 9.45 | 3.37 | 3.98 | 1.75 | 1.48 | 5.94 | 5.31 | 1.59 | 47.81 |
| 1949 | 2.34 | 3.15 | 2.47 | 5.08 | 3.83 | 0.03 | 2.17 | 2.33 | 2.35 | 1.36 | 3.21 | 1.50 | 29.82 |
| 1950 | 4.19 | 4.37 | 3.64 | 3.22 | 2.81 | 3.43 | 1.04 | 4.38 | 2.43 | 1.50 | 7.03 | 3.67 | 41.71 |
| Av. 57 yrs. | 4.01 | 3.45 | 4.14 | 4.04 | 3.39 | 3.35 | 3.35 | 3.68 | 3.56 | 3.50 | 3.98 | 3.88 | 44.33 |

LAWRENCE, MASS. (Essex Co.)—Elevation, 51 feet
Record: January, 1856, to December, 1950

| Year | Jan. | Feb. | Mar. | Apr. | May | June | July | Aug. | Sept. | Oct. | Nov. | Dec. | Annual |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1942 | 3.48 | 2.99 | 6.64 | 2.02 | 2.90 | 2.77 | 6.01 | 1.31 | 1.77 | 2.74 | 5.08 | 4.55 | 42.26 |
| 1943 | 2.68 | 1.35 | 3.03 | 2.89 | 4.74 | 2.03 | 5.01 | 2.59 | 0.44 | 4.89 | 4.17 | 0.82 | 34.59 |
| 1944 | 2.34 | 2.49 | 4.00 | 3.47 | 0.70 | 5.81 | 1.46 | 1.47 | 7.27 | 1.83 | 4.78 | 2.96 | 38.58 |
| 1945 | 2.18 | 3.75 | 1.62 | 3.03 | 4.49 | 5.44 | 4.09 | 2.75 | 0.99 | 1.99 | 5.45 | 4.79 | 40.57 |
| 1946 | 3.06 | 2.94 | 1.60 | 2.75 | 5.04 | 2.86 | 1.66 | 7.46 | 3.00 | 0.78 | 0.82 | 3.35 | 35.32 |
| 1947 | 2.44 | 1.13 | 3.18 | 4.04 | 3.60 | 2.47 | 5.57 | 2.28 | 3.12 | 0.29 | 5.17 | 2.22 | 35.51 |
| 1948 | 3.56 | 2.13 | 2.35 | 2.63 | 4.22 | 5.59 | 3.32 | 1.34 | 0.03 | 2.51 | 5.57 | 1.57 | 34.82 |
| 1949 | 3.62 | 3.10 | 1.46 | 4.98 | 3.77 | 0.75 | 1.72 | 2.79 | 5.97 | 2.00 | 2.92 | 1.38 | 34.46 |
| 1950 | 4.04 | 2.13 | 3.68 | 2.40 | 1.25 | 1.10 | 2.51 | *3.96 | 2.23 | 3.14 | 5.28 | 3.28 | *35.00 |
| Av. 95 yrs. | 3.60 | 3.22 | 3.79 | 3.48 | 3.30 | 3.27 | 3.74 | 3.73 | 3.34 | 3.20 | 3.56 | 3.42 | 41.65 |

*Estimated.

LAWRENCE, MASS. (Experiment Station)—Elevation, 45 feet
Record: January, 1904, to December, 1950

| Year | Jan. | Feb. | Mar. | Apr. | May | June | July | Aug. | Sept. | Oct. | Nov. | Dec. | Annual |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1942 | 3.34 | 2.82 | 6.69 | 1.84 | 3.01 | 2.75 | 6.18 | 1.41 | 2.05 | 2.96 | 5.40 | 5.82 | 44.27 |
| 1943 | 2.92 | 1.10 | 3.17 | 3.05 | 4.96 | 2.07 | 5.39 | 2.73 | 0.57 | 5.21 | 5.17 | 0.91 | 37.25 |
| 1944 | 3.15 | 2.28 | 3.81 | 3.46 | 0.72 | 5.65 | 1.43 | 1.46 | 7.09 | 2.13 | 6.23 | 3.08 | 40.49 |
| 1945 | 2.51 | 4.18 | 2.41 | 3.08 | 4.73 | 4.94 | 4.77 | 2.96 | 1.05 | 2.27 | 6.59 | 5.53 | 45.02 |
| 1946 | 3.27 | 2.66 | 1.43 | 2.88 | 5.64 | 2.97 | 1.74 | 8.56 | 3.31 | 0.84 | 0.85 | 3.36 | 37.51 |
| 1947 | 2.34 | 1.05 | 3.32 | 4.53 | 3.41 | 2.68 | 5.48 | 2.15 | 3.13 | 0.34 | 5.34 | 2.69 | 36.46 |
| 1948 | 4.57 | 2.23 | 2.42 | 3.10 | 4.85 | 5.82 | 3.36 | 1.31 | 0.27 | 3.15 | 5.77 | 2.02 | 38.37 |
| 1949 | 3.48 | 3.13 | 0.96 | 4.92 | 3.74 | 0.69 | 1.54 | 4.65 | 4.22 | 1.95 | 2.75 | 1.70 | 33.73 |
| 1950 | 5.12 | 2.94 | 3.75 | 2.28 | 1.29 | 1.32 | 3.00 | 4.48 | 1.44 | 3.22 | 5.31 | 3.30 | 37.45 |
| Av. 47 yrs. | 3.34 | 2.93 | 3.40 | 3.68 | 2.88 | 3.55 | 3.82 | 3.24 | 3.52 | 2.82 | 3.66 | 3.38 | 40.22 |

LAWRENCE, MASS. (Arlington Mills) (Roof Gage)
Record: January, 1911, to March, 1949

| Year | Jan. | Feb. | Mar. | Apr. | May | June | July | Aug. | Sept. | Oct. | Nov. | Dec. | Annual |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1942 | 3.27 | 3.01 | 7.04 | 2.06 | 2.79 | 2.24 | 5.07 | 1.05 | 1.78 | 2.46 | 4.64 | 5.42 | 40.83 |
| 1943 | 2.61 | 1.08 | 2.85 | 2.82 | 4.44 | 1.98 | 5.70 | 2.70 | 0.24 | 4.97 | 4.51 | 0.81 | 34.71 |
| 1944 | 2.86 | 2.50 | 3.95 | 3.35 | 0.66 | 5.58 | 1.38 | 1.23 | 7.81 | 0.79 | 5.12 | 1.85 | 37.08 |
| 1945 | 2.62 | 3.96 | 1.72 | 3.05 | 4.60 | 4.95 | 3.98 | 2.61 | 0.78 | 1.74 | 6.21 | 5.33 | 41.55 |
| 1946 | 3.46 | 2.85 | 1.54 | 2.79 | 5.25 | 2.47 | 0.81 | 7.86 | 2.77 | 0.77 | 0.71 | 3.54 | 34.82 |
| 1947 | 1.94 | 1.17 | 3.87 | 4.08 | 2.75 | 2.69 | 5.50 | 1.68 | 2.67 | 0.31 | 5.42 | 3.26 | 35.34 |
| 1948 | 5.19 | 2.61 | 2.68 | 2.55 | 3.95 | 4.38 | 2.74 | 1.25 | 0.03 | 2.68 | 4.53 | 1.49 | 34.08 |
| 1949 | 3.27 | 2.72 | 1.06 | (DISCONTINUED) | | | | | | | | | |
| Av. 38 yrs. | 3.03 | 2.76 | 3.69 | 3.63 | 3.10 | 3.52 | 3.85 | 3.24 | 3.27 | 2.86 | 3.65 | 3.16 | 39.76 |

LEICESTER, MASS. (Kettle Brook)—Elevation, 1,060 feet
Record: January, 1905, to December, 1950

| Year | Jan. | Feb. | Mar. | Apr. | May | June | July | Aug. | Sept. | Oct. | Nov. | Dec. | Annual |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1942 | 3.17 | 2.08 | 5.59 | 1.09 | 3.51 | 3.20 | 4.63 | 2.74 | 2.93 | 3.94 | 4.84 | 3.95 | 41.67 |
| 1943 | 2.82 | 1.09 | 2.63 | 1.64 | 5.54 | 3.78 | 5.29 | 1.54 | 0.55 | 5.71 | 5.15 | 0.32 | 36.06 |
| 1944 | 0.91 | 1.56 | 3.38 | 2.82 | 1.09 | 7.71 | 0.78 | 1.57 | 6.79 | 2.41 | 3.90 | 3.34 | 36.26 |
| 1945 | 2.83 | 3.60 | 2.43 | 4.71 | 6.31 | 8.15 | 4.92 | 4.53 | 1.86 | 2.44 | 6.17 | 5.02 | 52.97 |
| 1946 | 2.93 | 3.01 | 1.38 | 2.29 | 6.70 | 3.53 | 4.31 | 6.35 | 6.32 | 1.09 | 1.78 | 3.19 | 42.88 |
| 1947 | 3.16 | 2.24 | 3.22 | 4.98 | 2.92 | 3.43 | 5.55 | 1.47 | 3.46 | 1.73 | 5.87 | 2.75 | 40.78 |
| 1948 | 2.87 | 1.61 | 3.36 | 2.26 | 7.82 | 6.83 | 5.88 | 2.19 | 2.22 | 4.00 | 7.53 | 2.84 | 49.41 |
| 1949 | 3.59 | 2.75 | 1.37 | 3.97 | 4.57 | 0.82 | 1.82 | 3.97 | 2.24 | 2.04 | 2.52 | 3.10 | 32.76 |
| 1950 | 3.75 | 4.04 | 3.38 | 3.60 | 3.64 | 2.96 | 2.99 | 4.15 | 2.45 | 2.53 | 6.99 | 4.05 | 44.53 |
| Av. 46 yrs. | 3.48 | 3.24 | 3.74 | 3.58 | 3.71 | 3.98 | 3.98 | 3.80 | 4.22 | 3.34 | 4.02 | 3.43 | 44.52 |

LEICESTER, MASS. (Lynde Brook)—Elevation, 800 feet
Record: January, 1875, to December, 1950

| Year | Jan. | Feb. | Mar. | Apr. | May | June | July | Aug. | Sept. | Oct. | Nov. | Dec. | Annual |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1942 | 4.61 | 2.73 | 7.83 | 1.15 | 2.79 | 3.63 | 5.37 | 3.02 | 2.37 | 3.72 | 5.37 | 5.90 | 48.49 |
| 1943 | 3.08 | 1.26 | 4.08 | 3.79 | 5.85 | 2.25 | 5.31 | 1.85 | 0.59 | 5.35 | 5.05 | 0.86 | 39.32 |
| 1944 | 1.39 | 2.44 | 4.63 | 4.52 | 0.86 | 6.52 | 1.68 | 1.34 | 6.30 | 1.94 | 5.23 | 3.50 | 40.35 |
| 1945 | 3.00 | 3.88 | 2.33 | 4.92 | 5.96 | 7.26 | 2.70 | 4.06 | 1.44 | 2.05 | 5.07 | 5.14 | 47.81 |
| 1946 | 3.48 | 3.28 | 1.35 | 2.06 | 5.65 | 3.37 | 3.50 | 6.88 | 3.95 | 0.67 | 1.26 | 3.55 | 39.00 |
| 1947 | 3.16 | 1.94 | 3.39 | 5.40 | 3.29 | 3.84 | 5.14 | 1.66 | 2.92 | 1.58 | 6.22 | 2.17 | 40.71 |
| 1948 | 3.76 | 2.29 | 3.36 | 3.68 | 7.05 | 6.81 | 7.40 | 2.02 | 0.99 | 2.98 | 6.68 | 2.69 | 49.71 |
| 1949 | 4.14 | 2.97 | 1.39 | 4.38 | 4.22 | 0.88 | 2.15 | 3.40 | 2.00 | 1.71 | 3.06 | 2.87 | 33.17 |
| 1950 | 4.53 | 3.88 | 3.59 | 4.01 | 3.59 | 2.34 | 3.06 | 5.13 | 2.13 | 2.58 | 6.43 | 3.88 | 45.15 |
| Av. 76 yrs. | 3.58 | 3.28 | 4.06 | 3.58 | 3.47 | 3.46 | 4.04 | 3.94 | 3.59 | 3.37 | 3.82 | 3.47 | 43.61 |

LITTLETON, MASS.—Elevation, 325 feet
Record: January, 1918, to December, 1950

| Year | Jan. | Feb. | Mar. | Apr. | May | June | July | Aug. | Sept. | Oct. | Nov. | Dec. | Annual |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1942 | 3.58 | 2.73 | 7.49 | 1.33 | 3.45 | 5.33 | 5.40 | 1.57 | 2.20 | 2.73 | 4.72 | 5.65 | 46.18 |
| 1943 | 3.32 | 1.31 | 2.95 | 3.16 | 5.82 | 3.51 | 4.53 | 2.64 | 1.08 | 5.04 | 4.91 | 0.79 | 39.06 |
| 1944 | 2.11 | 2.27 | 4.36 | 3.68 | 1.07 | 7.35 | 2.34 | 3.08 | 6.42 | 2.43 | 5.30 | 3.11 | 43.52 |
| 1945 | 2.92 | 4.29 | 2.04 | 3.50 | 4.82 | 4.80 | 4.56 | 3.85 | 1.80 | 1.93 | 5.38 | 5.71 | 45.60 |
| 1946 | 3.54 | 3.12 | 1.66 | 2.53 | 6.16 | 4.05 | 2.98 | 6.51 | 5.62 | 0.96 | 0.79 | 2.54 | 40.46 |
| 1947 | 2.56 | 1.90 | 3.22 | 4.89 | 4.09 | 3.30 | 3.87 | 2.71 | 5.27 | 0.74 | 4.90 | 2.81 | 40.26 |
| 1948 | 3.53 | 2.21 | 2.68 | 2.71 | 5.52 | 5.12 | 4.10 | 2.50 | 0.57 | 2.09 | 6.28 | 1.78 | 39.09 |
| 1949 | 3.85 | 3.03 | 1.40 | 4.14 | 3.28 | 0.66 | 1.81 | 2.84 | 2.91 | 2.17 | 2.21 | 1.75 | 30.05 |
| 1950 | 4.38 | 3.42 | 3.54 | 2.13 | 1.48 | 1.80 | 1.48 | 4.15 | 2.02 | 3.70 | 5.31 | 3.74 | 37.65 |
| Av. 33 yrs. | 3.21 | 2.63 | 3.40 | 3.59 | 3.35 | 3.70 | 3.46 | 3.41 | 4.06 | 2.80 | 4.05 | 3.13 | 40.79 |

LOWELL, MASS. (Proprietors of Locks and Canals)—Elevation, 100 feet
Record: January, 1855, to December, 1950

| Year | Jan. | Feb. | Mar. | Apr. | May | June | July | Aug. | Sept. | Oct. | Nov. | Dec. | Annual |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1942 | 3.48 | 3.05 | 7.69 | 1.84 | 3.15 | 4.13 | 5.96 | 1.81 | 2.54 | 2.77 | 5.38 | 6.49 | 48.29 |
| 1943 | 4.09 | 1.57 | 3.78 | 3.33 | 5.23 | 2.83 | 6.12 | 2.26 | 1.11 | 5.00 | 4.64 | 0.85 | 40.81 |
| 1944 | 2.62 | 2.36 | 4.48 | 3.90 | 1.78 | 6.08 | 1.85 | 2.47 | 6.69 | 1.70 | 5.35 | 3.29 | 42.57 |
| 1945 | 3.38 | 4.73 | 1.78 | 2.75 | 5.68 | 5.11 | 3.95 | 3.14 | 1.58 | 2.48 | 7.77 | 6.33 | 48.68 |
| 1946 | 3.95 | 3.61 | 1.63 | 3.18 | 6.00 | 3.21 | 1.86 | 7.31 | 0.75 | 3.11 | 0.74 | 3.76 | 39.11 |
| 1947 | 2.77 | 1.82 | 3.99 | 4.02 | 4.82 | 3.31 | 6.14 | 2.13 | 3.14 | 0.58 | 5.03 | 3.09 | 40.84 |
| 1948 | 4.30 | 2.22 | 2.68 | 2.69 | 4.69 | 5.58 | 4.60 | 3.06 | 0.33 | 2.50 | 5.83 | 1.46 | 39.44 |
| 1949 | 4.02 | 3.17 | 1.61 | 4.03 | 3.49 | 0.64 | 1.69 | 2.63 | 5.38 | 1.99 | 2.58 | 1.72 | 32.95 |
| 1950 | 4.48 | 3.05 | 4.08 | 2.62 | 1.47 | 1.43 | 1.18 | 3.31 | 1.73 | 2.78 | 5.59 | 3.63 | 35.35 |
| Av. 96 yrs. | 3.82 | 3.61 | 4.02 | 3.71 | 3.40 | 3.42 | 3.65 | 3.93 | 3.44 | 3.28 | 3.79 | 3.66 | 43.73 |

LUDLOW, MASS. (Ludlow Reservoir)—Elevation, 410 feet
Record: June, 1875, to December, 1950

| Year | Jan. | Feb. | Mar. | Apr. | May | June | July | Aug. | Sept. | Oct. | Nov. | Dec. | Annual |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1942 | 3.55 | 1.56 | 6.89 | 1.08 | 3.77 | 3.93 | 5.63 | 2.29 | 4.81 | 3.57 | 5.76 | 5.13 | 47.97 |
| 1943 | 2.08 | 1.63 | 3.19 | 3.51 | 6.76 | 3.64 | 5.71 | 1.45 | 1.18 | 3.18 | 5.55 | 0.75 | 38.63 |
| 1944 | 1.24 | 2.21 | 3.53 | 4.59 | 1.23 | 6.95 | 1.66 | 4.03 | 7.16 | 2.20 | 4.51 | 2.54 | 41.85 |
| 1945 | 2.71 | 3.40 | 1.90 | 5.33 | 5.88 | 6.86 | 6.49 | 3.76 | 2.41 | 2.58 | 3.85 | 5.17 | 50.34 |
| 1946 | 1.95 | 2.26 | 1.87 | 2.40 | 5.04 | 3.78 | 3.86 | 4.39 | 2.65 | 0.80 | 1.10 | 2.53 | 32.58 |
| 1947 | 3.10 | 1.70 | 2.83 | 5.61 | 3.07 | 2.51 | 5.35 | 1.90 | 2.93 | 2.38 | 5.33 | 3.24 | 39.95 |
| 1948 | 2.54 | 1.86 | 2.95 | 3.35 | 4.54 | 6.83 | 5.12 | 2.74 | 1.36 | 0.65 | 6.78 | 2.43 | 41.15 |
| 1949 | 4.07 | 2.24 | 1.40 | 2.37 | 5.02 | 0.70 | 3.91 | 5.45 | 2.38 | 2.57 | 1.81 | 3.61 | 35.53 |
| 1950 | 4.08 | 3.11 | 2.65 | 3.92 | 3.49 | 4.16 | 2.87 | 4.22 | 1.52 | 2.04 | 5.89 | 3.43 | 41.38 |
| Av. 75 yrs. | 3.17 | 2.84 | 3.52 | 3.22 | 3.44 | 3.66 | 4.25 | 3.82 | 3.61 | 3.11 | 3.33 | 3.21 | 41.18 |

LYNN, MASS. (City Yard Service Building)—Elevation, 70 feet
Record: January, 1929, to December, 1950

| Year | Jan. | Feb. | Mar. | Apr. | May | June | July | Aug. | Sept. | Oct. | Nov. | Dec. | Annual |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1942 | 3.90 | 4.12 | 7.36 | 1.46 | 1.74 | 2.88 | 2.86 | 2.84 | 2.16 | 3.14 | 5.68 | 4.43 | 42.57 |
| 1943 | 2.88 | 0.89 | 3.88 | 2.65 | 4.69 | 1.73 | 3.66 | 1.93 | 1.75 | 4.55 | 2.80 | 1.00 | 32.41 |
| 1944 | 2.82 | 2.08 | 3.94 | 3.73 | 0.50 | 4.20 | 2.20 | 4.28 | 5.46 | 2.50 | 6.43 | 2.91 | 41.05 |
| 1945 | 3.70 | 4.36 | 1.98 | 2.15 | 4.62 | 5.35 | 3.08 | 3.16 | 1.11 | 2.22 | 7.64 | 6.87 | 46.24 |
| 1946 | 4.27 | 3.36 | 1.42 | 2.78 | 5.11 | 2.58 | 1.77 | 9.82 | 2.31 | 0.20 | 0.95 | 4.11 | 38.68 |
| 1947 | 2.58 | 1.12 | 2.47 | 4.38 | 3.82 | 2.55 | 3.64 | 1.53 | 4.27 | 0.81 | 5.99 | 4.76 | 37.92 |
| 1948 | 4.87 | 2.03 | 2.66 | 2.55 | 5.41 | 3.76 | 5.25 | 1.16 | 1.22 | 4.61 | 5.02 | 1.19 | 39.73 |
| 1949 | 3.44 | 3.43 | 0.96 | 2.93 | 2.83 | 0.59 | 2.14 | 4.30 | 5.05 | 1.84 | 3.69 | 1.91 | 33.11 |
| 1950 | 3.88 | 3.27 | 2.96 | 2.15 | 1.44 | 1.04 | 1.19 | 2.53 | 1.18 | 2.11 | 7.05 | 3.40 | 32.15 |
| Av. 22 yrs. | 3.81 | 2.94 | 3.74 | 3.49 | 2.98 | 3.25 | 3.03 | 3.52 | 3.30 | 2.90 | 3.97 | 3.41 | 40.34 |

LYNN, MASS. (Sewage Pumping Station)—Elevation, 18 feet
Record: January, 1932, to December, 1950

| Year | Jan. | Feb. | Mar. | Apr. | May | June | July | Aug. | Sept. | Oct. | Nov. | Dec. | Annual |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1942 | 4.35 | 4.42 | 8.22 | 1.75 | 1.95 | 2.87 | 3.44 | 2.84 | 2.26 | 2.97 | 5.59 | 4.24 | 44.90 |
| 1943 | 2.57 | 1.25 | 4.84 | 2.88 | 4.74 | 1.64 | 3.84 | 2.07 | 1.42 | 5.12 | 3.11 | 1.19 | 34.67 |
| 1944 | 2.56 | 1.85 | 3.11 | 4.25 | 0.60 | 4.55 | 2.14 | 3.69 | 6.16 | 2.48 | 6.97 | 2.87 | 41.23 |
| 1945 | 2.76 | 3.72 | 2.05 | 2.28 | 4.52 | 5.40 | 2.82 | 3.06 | 1.29 | 2.52 | 8.22 | 6.29 | 44.93 |
| 1946 | 3.71 | 2.90 | 1.56 | 3.08 | 4.85 | 2.73 | 1.76 | 8.15 | 1.92 | 0.31 | 0.85 | 3.30 | 35.12 |
| 1947 | 2.37 | 0.38 | 2.26 | 3.44 | 3.50 | 2.36 | 2.64 | 1.35 | 3.45 | 0.50 | 4.71 | 3.73 | 30.69 |
| 1948 | 3.27 | 1.30 | 2.03 | 1.85 | 4.48 | 3.40 | 4.08 | 1.29 | 0.75 | 4.95 | 4.47 | 0.80 | 31.77 |
| 1949 | 2.28 | 2.56 | 1.06 | 2.72 | 2.16 | 0.50 | 1.08 | 1.21 | 5.77 | 1.41 | 2.90 | 1.59 | 25.24 |
| 1950 | 3.35 | 1.48 | 2.76 | 1.71 | 1.52 | 1.40 | 1.20 | 2.60 | 1.35 | 2.27 | 7.69 | 3.10 | 30.43 |
| Av. 19 yrs. | 3.42 | 2.32 | 3.55 | 3.48 | 2.76 | 3.02 | 2.69 | 2.91 | 3.30 | 2.72 | 3.94 | 3.10 | 37.21 |

LYNN, MASS. (Water Works Pumping Station)—Elevation, 40 feet
Record: July, 1872, to December, 1950

| Year | Jan. | Feb. | Mar. | Apr. | May | June | July | Aug. | Sept. | Oct. | Nov. | Dec. | Annual |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1942 | 3.91 | 4.16 | 7.03 | 1.54 | 1.69 | 2.75 | 3.01 | 2.88 | 2.36 | 3.12 | 5.66 | 4.42 | 42.53 |
| 1943 | 3.37 | 1.24 | 4.72 | 2.77 | 4.94 | 2.29 | 3.46 | 2.16 | 1.72 | 4.83 | 3.17 | 1.04 | 35.71 |
| 1944 | 2.88 | 2.03 | 3.65 | 3.66 | 0.64 | 4.11 | 2.81 | 4.71 | 5.97 | 2.68 | 6.64 | 3.28 | 43.06 |
| 1945 | 3.75 | 4.74 | 1.97 | 2.41 | 4.65 | 5.11 | 3.51 | 3.05 | 1.28 | 2.21 | 8.87 | 6.81 | 48.36 |
| 1946 | 4.49 | 3.57 | 1.58 | 2.76 | 4.94 | 2.69 | 2.27 | 9.31 | 2.01 | 0.37 | 1.18 | 4.43 | 39.60 |
| 1947 | 2.78 | 1.31 | 2.94 | 4.59 | 4.08 | 2.40 | 4.04 | 1.93 | 3.30 | 0.78 | 5.99 | 4.80 | 38.94 |
| 1948 | 5.20 | 1.90 | 2.76 | 2.64 | 5.20 | 4.38 | 5.25 | 1.24 | 1.40 | 4.26 | 5.32 | 1.34 | 40.89 |
| 1949 | 3.59 | 3.74 | 1.32 | 3.37 | 3.31 | 0.67 | 2.07 | 4.30 | 5.06 | 1.97 | 3.91 | 2.26 | 35.57 |
| 1950 | 4.50 | 3.43 | 3.29 | 2.11 | 1.75 | 1.04 | 1.37 | 2.58 | 1.21 | 2.17 | 6.92 | 3.87 | 34.24 |
| Av. 78 yrs. | 3.67 | 3.32 | 3.74 | 3.48 | 3.17 | 3.20 | 3.37 | 3.69 | 3.24 | 3.24 | 3.66 | 3.38 | 41.16 |

MANCHESTER, MASS. (Water Works Pumping Station)—Elevation, 20 feet
Record: January, 1913, to December, 1950

| Year | Jan. | Feb. | Mar. | Apr. | May | June | July | Aug. | Sept. | Oct. | Nov. | Dec. | Annual |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1942 | 3.65 | 4.22 | 6.33 | 1.56 | 2.49 | 3.93 | 4.39 | 4.81 | 2.15 | 2.44 | 5.27 | 4.04 | 45.28 |
| 1943 | 3.66 | 1.21 | 3.38 | 2.84 | 5.21 | 1.54 | 3.23 | 1.39 | 2.13 | 5.24 | 4.03 | 1.23 | 35.09 |
| 1944 | 3.00 | 2.02 | 3.26 | 3.64 | 0.57 | 4.59 | 1.81 | 1.73 | 5.55 | 2.14 | 7.22 | 3.89 | 39.42 |
| 1945 | 3.64 | 4.85 | 1.91 | 2.65 | 4.14 | 5.84 | 3.67 | 3.50 | 1.43 | 2.89 | 8.67 | 10.03 | 52.72 |
| 1946 | 4.35 | 3.27 | 1.71 | 3.27 | 4.92 | 2.52 | 1.15 | 10.59 | 2.47 | 0.68 | 1.41 | 4.37 | 40.71 |
| 1947 | 2.70 | 1.13 | 2.74 | 4.14 | 3.80 | 2.89 | 4.68 | 1.71 | 3.01 | 0.52 | 5.85 | 4.12 | 37.29 |
| 1948 | 5.49 | 2.93 | 3.06 | 2.80 | 5.17 | 4.49 | 4.46 | 1.27 | 1.08 | 5.30 | 5.45 | 1.52 | 43.02 |
| 1949 | 4.71 | 3.82 | 2.33 | 2.67 | 3.05 | 0.45 | 2.22 | 3.81 | 5.50 | 1.91 | 4.35 | 1.32 | 36.14 |
| 1950 | 4.77 | 3.28 | 3.08 | 1.98 | 1.37 | 1.40 | 1.06 | 3.41 | 1.36 | 1.79 | 6.64 | 3.31 | 33.45 |
| Av. 38 yrs. | 3.71 | 3.16 | 3.46 | 3.80 | 3.21 | 3.44 | 3.31 | 3.39 | 3.49 | 3.07 | 3.86 | 3.53 | 41.43 |

MANSFIELD, MASS. (Water Works Pumping Station)—Elevation, 240 feet
Record: September, 1921, to December, 1950

| Year | Jan. | Feb. | Mar. | Apr. | May | June | July | Aug. | Sept. | Oct. | Nov. | Dec. | Annual |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1942 | 4.01 | 2.60 | 6.92 | 1.06 | 1.84 | 3.44 | 6.51 | 3.77 | 2.07 | 3.84 | 4.26 | 4.82 | 45.14 |
| 1943 | 4.13 | 1.05 | 2.53 | 4.01 | 4.85 | 2.78 | 4.02 | 2.54 | 1.59 | 4.16 | 3.67 | 0.51 | 35.84 |
| 1944 | 1.93 | 2.04 | 4.61 | 4.06 | 0.48 | 4.40 | 2.04 | 0.98 | 9.62 | 3.71 | 7.35 | 3.36 | 44.58 |
| 1945 | 3.23 | 4.84 | 2.34 | 2.74 | 5.11 | 7.06 | 5.02 | 3.21 | 3.17 | 2.90 | 9.64 | 7.15 | 56.41 |
| 1946 | 3.66 | 3.02 | 1.93 | 2.42 | 4.70 | 4.59 | 1.36 | 9.88 | 2.73 | 0.28 | 0.97 | 3.27 | 38.81 |
| 1947 | 2.79 | 1.34 | 2.77 | 4.52 | 4.38 | 4.64 | 4.20 | 1.68 | 7.01 | 1.67 | 5.96 | 4.26 | 45.22 |
| 1948 | 6.26 | 2.05 | 3.80 | 3.62 | 7.49 | 4.10 | 7.25 | 2.80 | 1.46 | 5.96 | 6.42 | 2.04 | 53.25 |
| 1949 | 3.37 | 3.39 | 1.58 | 4.17 | 4.20 | 0.12 | 0.93 | 2.06 | 2.44 | 1.64 | 4.09 | 2.07 | 30.06 |
| 1950 | 3.39 | 3.72 | 2.95 | 2.97 | 2.08 | 1.71 | 1.67 | 5.62 | 1.70 | 1.88 | 7.33 | 3.47 | 38.49 |
| Av. 29 yrs. | 3.79 | 2.98 | 3.74 | 3.61 | 3.17 | 3.71 | 3.40 | 3.64 | 3.65 | 3.14 | 3.84 | 3.46 | 42.13 |

MARLBOROUGH, MASS. (Water Works Pumping Station)—Elevation, 450 feet
Record: January, 1900, to December, 1950

| Year | Jan. | Feb. | Mar. | Apr. | May | June | July | Aug. | Sept. | Oct. | Nov. | Dec. | Annual |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1942 | 3.71 | 2.61 | 5.81 | 1.38 | 2.39 | 3.50 | 6.50 | 2.74 | 1.97 | 3.12 | 5.16 | 6.34 | 45.23 |
| 1943 | 2.36 | 0.98 | 3.49 | 3.55 | 4.74 | 3.94 | 4.19 | 1.57 | 0.79 | 5.58 | 4.30 | 0.99 | 36.48 |
| 1944 | 1.56 | 1.85 | 3.73 | 3.91 | 0.73 | 4.75 | 1.58 | 0.66 | 4.76 | 1.89 | 5.61 | 2.95 | 33.98 |
| 1945 | 2.36 | 2.97 | 2.25 | 3.16 | 5.33 | 6.90 | 3.44 | 3.57 | 1.40 | 1.89 | 5.65 | 5.32 | 44.24 |
| 1946 | 3.54 | 3.11 | 1.42 | 2.62 | 6.13 | 3.36 | 2.09 | 6.71 | 3.75 | 0.51 | 1.09 | 3.68 | 38.01 |
| 1947 | 2.88 | 1.80 | 2.90 | 4.66 | 2.97 | 3.35 | 5.62 | 1.41 | 2.80 | 1.06 | 4.37 | 3.11 | 36.93 |
| 1948 | 4.10 | 2.13 | 2.83 | 2.72 | 6.06 | 7.07 | 5.26 | 1.95 | 0.72 | 2.70 | 5.83 | 1.58 | 42.95 |
| 1949 | 3.06 | 2.46 | 1.57 | 3.66 | 3.64 | 0.75 | 1.53 | 4.05 | 2.79 | 1.69 | 2.35 | 2.28 | 29.83 |
| 1950 | 4.09 | 3.37 | 3.83 | 2.77 | 1.68 | 1.99 | 3.28 | 6.83 | 1.73 | 2.63 | 5.00 | 3.67 | 40.87 |
| Av. 51 yrs. | 3.13 | 2.94 | 3.37 | 3.50 | 3.18 | 3.70 | 3.49 | 3.44 | 3.65 | 2.80 | 3.53 | 3.33 | 40.06 |

MERRIMACK RIVER WATERSHED (Essex Company Records)
Record: January, 1880, to December, 1950

| Year | Jan. | Feb. | Mar. | Apr. | May | June | July | Aug. | Sept. | Oct. | Nov. | Dec. | Annual |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1942 | 3.27 | 2.72 | 6.75 | 1.86 | 2.82 | 4.85 | 5.41 | 1.88 | 2.99 | 2.86 | 5.07 | 5.45 | 45.93 |
| 1943 | 2.81 | 1.60 | 3.10 | 3.61 | 5.04 | 2.74 | 5.08 | 3.38 | 1.16 | 5.41 | 4.98 | 0.84 | 39.70 |
| 1944 | 1.79 | 2.55 | 4.24 | 3.80 | 1.35 | 6.80 | 2.49 | 1.38 | 6.60 | 2.40 | 4.37 | 3.19 | 40.96 |
| 1945 | 3.69 | 3.95 | 1.96 | 4.03 | 5.71 | 5.88 | 4.44 | 2.71 | 2.35 | 2.86 | 5.53 | 5.42 | 48.53 |
| 1946 | 3.37 | 3.04 | 1.55 | 2.75 | 5.44 | 2.93 | 3.13 | 7.16 | 4.26 | 1.67 | 1.52 | 3.93 | 40.75 |
| 1947 | 3.29 | 2.13 | 3.38 | 3.68 | 4.22 | 4.21 | 5.01 | 1.81 | 2.81 | 0.89 | 5.52 | 2.88 | 39.83 |
| 1948 | 3.54 | 2.12 | 3.01 | 3.03 | 6.11 | 4.76 | 4.11 | 2.11 | 0.65 | 2.53 | 6.41 | 2.48 | 40.86 |
| 1949 | 3.79 | 2.91 | 1.96 | 3.87 | 3.78 | 1.28 | 2.31 | 2.54 | 4.63 | 2.11 | 2.66 | 2.29 | 34.13 |
| 1950 | 4.42 | 3.25 | 3.60 | 3.11 | 1.90 | 2.76 | 2.17 | 4.46 | 2.10 | 2.74 | 6.12 | 3.67 | 40.30 |
| Av. 71 yrs. | 3.52 | 3.28 | 3.61 | 3.30 | 3.37 | 3.51 | 3.76 | 3.56 | 3.64 | 3.18 | 3.61 | 3.43 | 41.76 |

MIDDLEBOROUGH, MASS. (Water Works Pumping Station)—Elevation, 53 feet
Record: July, 1886, to December, 1950

| Year | Jan. | Feb. | Mar. | Apr. | May | June | July | Aug. | Sept. | Oct. | Nov. | Dec. | Annual |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1942 | 4.42 | 2.87 | 7.86 | 0.89 | 1.17 | 3.31 | 4.39 | 6.16 | 2.14 | 4.17 | 5.29 | 3.89 | 46.56 |
| 1943 | 3.84 | 1.75 | 2.94 | 3.53 | 4.91 | 1.74 | 4.14 | 3.69 | 1.58 | 3.51 | 2.59 | 1.37 | 35.59 |
| 1944 | 2.36 | 2.16 | 4.77 | 3.56 | 0.45 | 3.41 | 1.35 | 1.79 | 6.67 | 2.30 | 7.87 | 3.62 | 40.31 |
| 1945 | 4.02 | 4.45 | 2.24 | 2.33 | 4.82 | 3.65 | 2.00 | 2.42 | 1.87 | 3.56 | 10.27 | 8.72 | 50.35 |
| 1946 | 3.61 | 2.86 | 1.66 | 2.56 | 4.54 | 3.60 | 1.21 | 12.80 | 3.13 | 0.59 | 1.05 | 3.45 | 41.06 |
| 1947 | 2.87 | 1.47 | 2.92 | 5.88 | 4.57 | 4.27 | 4.31 | 1.23 | 1.90 | 2.63 | 4.14 | 3.82 | 40.01 |
| 1948 | 6.45 | 2.52 | 3.99 | 3.54 | 8.60 | 3.33 | 3.00 | 2.28 | 2.16 | 7.08 | 4.69 | 2.34 | 49.98 |
| 1949 | 3.96 | 4.55 | 2.41 | 4.12 | 3.57 | 0.07 | 2.19 | 1.62 | 2.50 | 1.32 | 3.46 | 2.43 | 32.20 |
| 1950 | 4.16 | 4.07 | 3.82 | 3.08 | 2.78 | 2.84 | 1.59 | 4.12 | 2.85 | 1.58 | 6.60 | 3.71 | 41.20 |
| Av. 64 yrs. | 4.05 | 3.61 | 4.07 | 3.76 | 3.20 | 3.11 | 3.24 | 3.60 | 3.47 | 3.59 | 3.81 | 3.71 | 43.22 |

MIDDLEFIELD, MASS.—Elevation, 1,650 feet
Record: July, 1920, to December, 1950

| Year | Jan. | Feb. | Mar. | Apr. | May | June | July | Aug. | Sept. | Oct. | Nov. | Dec. | Annual |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1942 | 3.11 | 1.81 | 8.29 | 1.63 | 4.49 | 4.30 | 6.60 | 2.03 | 4.68 | 5.18 | 5.44 | 5.47 | 53.03 |
| 1943 | 2.27 | 1.30 | 2.67 | 2.35 | 6.67 | 4.06 | 5.81 | 2.93 | 1.21 | 4.25 | 3.89 | 0.53 | 37.94 |
| 1944 | 1.51 | 1.66 | 3.90 | 3.56 | 1.28 | 5.30 | 4.33 | 1.53 | 3.92 | 1.72 | 3.94 | 2.62 | 35.32 |
| 1945 | 4.17 | 3.38 | 1.84 | 5.05 | 5.96 | 6.54 | 8.28 | 3.54 | 3.58 | 2.72 | 3.57 | 3.86 | 52.49 |
| 1946 | 2.30 | 3.26 | 1.27 | 2.48 | 6.26 | 3.28 | 5.53 | 2.26 | 5.54 | 2.12 | 1.37 | 3.43 | 39.10 |
| 1947 | 4.48 | 2.86 | 4.00 | 5.03 | 5.17 | 3.10 | 4.42 | 3.86 | 2.98 | 2.76 | — | — | — |
| 1948 | — | — | — | 3.24 | 6.66 | 8.62 | 2.87 | 3.26 | 1.54 | 1.53 | 4.51 | 11.43 | — |
| 1949 | — | — | — | — | — | — | — | — | — | 3.22 | 1.18 | — | — |
| 1950 | 4.59 | 2.80 | 1.86 | 2.31 | 5.19 | 3.71 | 4.08 | 4.67 | 1.93 | 2.85 | 9.49 | 5.34 | 48.82 |
| Av. 27 yrs. | 3.17 | 2.62 | 3.47 | 3.26 | 4.12 | 4.64 | 4.52 | 3.93 | 4.46 | 3.43 | 4.08 | 3.03 | 44.73 |

MIDDLETON, MASS. (Danvers Pumping Station)—Elevation, 97 feet
Record: November, 1925, to December, 1950

| Year | Jan. | Feb. | Mar. | Apr. | May | June | July | Aug. | Sept. | Oct. | Nov. | Dec. | Annual |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1942 | 3.28 | 4.12 | 6.76 | 1.80 | 2.80 | 3.45 | 4.61 | 1.84 | 2.00 | 2.91 | 4.21 | 5.15 | 42.93 |
| 1943 | 3.19 | 1.05 | 3.25 | 2.33 | 4.85 | 1.32 | 4.26 | 1.74 | 0.57 | 4.77 | 3.97 | 0.94 | 32.24 |
| 1944 | 3.07 | 2.30 | 3.64 | 3.33 | 0.54 | 5.05 | 2.71 | 1.84 | 5.97 | 2.34 | 5.79 | 4.21 | 40.79 |
| 1945 | 3.09 | 3.81 | 1.57 | 2.89 | 4.20 | 7.09 | 2.29 | 3.60 | 1.36 | 2.28 | 7.72 | 6.35 | 46.25 |
| 1946 | 4.05 | 2.82 | 1.38 | 2.60 | 4.50 | 3.01 | 0.90 | 9.49 | 0.84 | 2.75 | 0.86 | 3.99 | 37.19 |
| 1947 | 2.72 | 1.43 | 2.82 | 3.93 | 4.05 | 2.12 | 4.08 | 1.80 | 2.42 | 0.38 | 6.67 | 4.10 | 36.52 |
| 1948 | 4.28 | 1.87 | 2.41 | 2.37 | 5.07 | 4.67 | 4.40 | 0.87 | 0.21 | 3.97 | 5.24 | 0.96 | 36.32 |
| 1949 | 3.03 | 3.53 | 1.96 | 4.21 | 3.78 | 1.71 | 1.42 | 2.13 | 8.82 | 1.91 | 3.07 | 1.85 | 37.42 |
| 1950 | 4.24 | 2.87 | 3.63 | 1.84 | 1.52 | 1.10 | 1.33 | 4.33 | 1.17 | 3.46 | 5.04 | 4.05 | 34.58 |
| Av. 25 yrs. | 3.55 | 2.89 | 3.46 | 3.41 | 2.95 | 3.33 | 2.79 | 3.15 | 3.53 | 3.09 | 3.71 | 3.54 | 39.40 |

MILFORD, MASS. (Water Works Pumping Station)—Elevation, 275 feet
Record: January, 1915, to December, 1950

| Year | Jan. | Feb. | Mar. | Apr. | May | June | July | Aug. | Sept. | Oct. | Nov. | Dec. | Annual |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1942 | 4.68 | 2.91 | 7.77 | 0.99 | 2.40 | 3.53 | 5.91 | 2.70 | 1.90 | 3.50 | 4.76 | 6.90 | 47.95 |
| 1943 | 2.69 | 1.41 | 4.18 | 3.69 | 5.59 | 2.07 | 4.70 | 1.12 | 0.98 | 7.27 | 3.40 | 1.14 | 38.24 |
| 1944 | 1.69 | 2.08 | 4.40 | 4.35 | 0.76 | 4.01 | 1.55 | 1.78 | 8.51 | 2.27 | 6.47 | 3.36 | 41.23 |
| 1945 | 2.68 | 4.03 | 2.20 | 3.00 | 5.85 | 8.53 | 3.00 | 3.97 | 1.62 | 1.80 | 7.08 | 6.12 | 49.88 |
| 1946 | 3.72 | 3.28 | 1.54 | 2.67 | 5.03 | 3.70 | 1.30 | 9.43 | 3.30 | 0.47 | 1.23 | 4.00 | 39.67 |
| 1947 | 2.57 | 1.63 | 3.21 | 4.81 | 3.61 | 4.30 | 4.61 | 2.48 | 3.61 | 1.61 | 5.54 | 2.96 | 40.94 |
| 1948 | 4.66 | 1.80 | 3.20 | 2.48 | 5.53 | 4.32 | 6.02 | 2.52 | 0.75 | 2.97 | 6.36 | 1.81 | 42.42 |
| 1949 | 3.55 | 3.18 | 1.78 | 3.66 | 4.39 | 0.35 | 1.54 | 5.40 | 2.74 | 1.83 | 2.55 | 1.95 | 32.92 |
| 1950 | 4.15 | 4.02 | 3.37 | 3.66 | 2.27 | 2.36 | 3.91 | 4.98 | 1.91 | 2.76 | 6.48 | 3.69 | 43.56 |
| Av. 36 yrs. | 3.39 | 2.90 | 3.47 | 3.50 | 3.09 | 3.83 | 3.79 | 3.88 | 3.67 | 2.86 | 3.82 | 3.29 | 41.49 |

MILLBURY, MASS.—Elevation, 330 feet
Record: October, 1922, to December, 1950

| Year | Jan. | Feb. | Mar. | Apr. | May | June | July | Aug. | Sept. | Oct. | Nov. | Dec. | Annual |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1942 | 2.91 | 3.96 | 7.28 | 1.35 | 2.09 | 3.87 | 5.89 | 2.10 | 1.46 | 3.20 | 5.35 | 6.71 | 46.17 |
| 1943 | 3.67 | 1.43 | 4.33 | 2.86 | 5.60 | 1.72 | 4.44 | 1.00 | 0.34 | 5.84 | 4.34 | 1.04 | 36.61 |
| 1944 | 1.49 | 2.54 | 4.67 | 4.52 | 0.78 | 4.69 | 1.92 | 1.00 | 6.07 | 2.49 | 4.66 | 3.09 | 37.92 |
| 1945 | 3.58 | 3.62 | 2.43 | 3.23 | 5.35 | 6.34 | 2.79 | 3.30 | 1.56 | 1.53 | 5.99 | 5.97 | 45.69 |
| 1946 | 3.99 | 3.10 | 1.24 | 2.27 | 4.86 | 3.19 | 1.29 | 8.12 | 1.89 | 3.42 | 1.08 | 3.74 | 38.19 |
| 1947 | 2.93 | 2.58 | 2.80 | 4.30 | 3.02 | 3.40 | 4.62 | 1.15 | 3.15 | 1.29 | 4.30 | 3.32 | 36.86 |
| 1948 | 4.40 | 1.85 | 3.89 | 3.10 | 6.15 | 5.71 | 4.85 | 3.35 | 0.11 | 3.38 | 5.55 | 1.96 | 43.80 |
| 1949 | 3.47 | 3.24 | 2.46 | 3.51 | 3.16 | 0.20 | 1.13 | 1.40 | 3.35 | 1.46 | 2.27 | 2.66 | 28.81 |
| 1950 | 4.08 | 4.22 | 3.61 | 3.89 | 3.11 | 2.64 | 3.53 | 6.67 | 2.57 | 2.65 | 4.45 | 3.41 | 44.83 |
| Av. 28 yrs. | 3.65 | 2.99 | 3.64 | 3.54 | 3.04 | 3.87 | 3.33 | 3.59 | 3.48 | 3.11 | 3.87 | 3.56 | 41.67 |

MILLERS RIVER WATERSHED, MASS.
Record: January, 1916, to December, 1950

| Year | Jan. | Feb. | Mar. | Apr. | May | June | July | Aug. | Sept. | Oct. | Nov. | Dec. | Annual |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1942 | 3.41 | 1.81 | 6.48 | 1.22 | 3.03 | 5.01 | 5.40 | 1.88 | 3.51 | 3.55 | 4.81 | 4.66 | 44.77 |
| 1943 | 2.33 | 1.46 | 2.70 | 3.60 | 5.99 | 2.03 | 4.89 | 2.91 | 2.03 | 5.21 | 6.03 | 0.58 | 39.76 |
| 1944 | 1.39 | 2.00 | 4.20 | 3.55 | 1.20 | 8.40 | 4.34 | 0.82 | 6.45 | 1.96 | 3.33 | 2.67 | 40.31 |
| 1945 | 3.02 | 3.60 | 1.74 | 5.39 | 5.96 | 6.88 | 6.78 | 2.80 | 3.08 | 2.85 | 3.63 | 3.96 | 49.69 |
| 1946 | 2.67 | 3.25 | 1.61 | 2.56 | 6.09 | 4.89 | 4.38 | 5.11 | 4.53 | 1.21 | 1.01 | 3.13 | 40.44 |
| 1947 | 3.17 | 2.46 | 2.88 | 3.85 | 3.68 | 3.86 | 4.08 | 2.54 | 3.51 | 1.34 | 5.44 | 2.62 | 39.43 |
| 1948 | 2.78 | 2.24 | 3.24 | 3.38 | 6.65 | 5.87 | 3.58 | 1.93 | 1.44 | 1.53 | 6.24 | 2.64 | 41.52 |
| 1949 | 4.50 | 2.95 | 1.58 | 3.92 | 4.19 | 1.28 | 3.03 | 3.00 | 3.45 | 2.53 | 2.05 | 3.10 | 35.58 |
| 1950 | 4.83 | 3.21 | 2.50 | 3.37 | 2.84 | 4.61 | 2.70 | 4.45 | 1.38 | 2.19 | 7.14 | 3.75 | 42.97 |
| Av. 35 yrs. | 3.20 | 2.76 | 3.41 | 3.63 | 3.62 | 4.51 | 4.19 | 3.60 | 4.11 | 2.90 | 3.97 | 3.15 | 43.05 |

MILLIS, MASS. (Water Works Pumping Station)—Elevation, 130 feet
Record: November, 1920, to December, 1950

| Year | Jan. | Feb. | Mar. | Apr. | May | June | July | Aug. | Sept. | Oct. | Nov. | Dec. | Annual |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1942 | 3.57 | 2.60 | 7.01 | 1.09 | 2.21 | 2.76 | 6.18 | 2.35 | 2.01 | 3.82 | 4.57 | 5.86 | 44.03 |
| 1943 | 3.25 | 1.35 | 4.43 | 3.88 | 5.25 | 1.81 | 5.95 | 0.81 | 0.70 | 5.20 | 2.85 | 1.17 | 36.65 |
| 1944 | 1.72 | 2.32 | 4.27 | 3.98 | 0.59 | 5.18 | 2.27 | 3.57 | 7.70 | 2.90 | 6.37 | 3.02 | 43.89 |
| 1945 | 3.09 | 4.74 | 1.96 | 2.83 | 5.01 | 6.04 | 3.01 | 3.23 | 1.77 | 2.74 | 7.70 | 7.24 | 49.36 |
| 1946 | 3.93 | 3.38 | 1.79 | 2.39 | 5.29 | 3.62 | 1.28 | 9.55 | 2.79 | 0.64 | 1.11 | 3.87 | 39.64 |
| 1947 | 2.05 | 1.54 | 2.91 | 4.53 | 4.62 | 4.46 | 5.88 | 1.61 | 3.13 | 1.28 | 6.00 | 4.67 | 42.68 |
| 1948 | 5.83 | 1.84 | 2.86 | 2.75 | 5.47 | 4.17 | 6.57 | 1.49 | 1.23 | 3.91 | 5.96 | 1.85 | 43.93 |
| 1949 | 3.17 | 3.28 | 1.46 | 3.67 | 3.58 | 0.30 | 1.35 | 5.93 | 3.57 | 1.56 | 3.06 | 1.68 | 32.61 |
| 1950 | 3.00 | 3.81 | 2.74 | 3.19 | 2.06 | 2.23 | 3.68 | 3.22 | 2.60 | 2.28 | 6.03 | 3.39 | 38.23 |
| Av. 30 yrs. | 3.14 | 2.67 | 3.40 | 3.26 | 2.72 | 3.48 | 3.41 | 3.59 | 3.11 | 2.75 | 3.35 | 3.22 | 38.10 |

MILTON, MASS. (Blue Hill Observatory)—Elevation, 640 feet
Record: February, 1885, to December, 1950

| Year | Jan. | Feb. | Mar. | Apr. | May | June | July | Aug. | Sept. | Oct. | Nov. | Dec. | Annual |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1942 | 3.57 | 3.88 | 7.89 | 1.83 | 1.98 | 2.78 | 5.47 | 2.84 | 2.49 | 3.16 | 5.37 | 5.06 | 46.32 |
| 1943 | 4.42 | 1.65 | 3.63 | 3.07 | 4.91 | 1.98 | 2.92 | 1.48 | 1.33 | 5.56 | 3.10 | 1.12 | 35.17 |
| 1944 | 2.30 | 2.65 | 4.63 | 3.59 | 0.50 | 5.22 | 3.29 | 1.35 | 8.36 | 3.51 | 7.21 | 3.00 | 45.61 |
| 1945 | 3.82 | 5.14 | 2.51 | 2.56 | 5.08 | 6.58 | 3.03 | 3.88 | 1.83 | 2.57 | 9.29 | 8.16 | 54.45 |
| 1946 | 4.13 | 3.70 | 1.72 | 2.27 | 5.18 | 4.38 | 1.14 | 11.44 | 2.84 | 0.30 | 0.98 | 3.88 | 41.96 |
| 1947 | 2.91 | 1.58 | 2.71 | 4.36 | 5.27 | 5.00 | 4.10 | 1.97 | 4.76 | 1.91 | 5.07 | 5.30 | 44.94 |
| 1948 | 6.32 | 2.51 | 3.51 | 2.73 | 5.57 | 4.58 | 5.81 | 1.22 | 0.62 | 7.36 | 5.66 | 1.91 | 47.80 |
| 1949 | 3.62 | 2.73 | 2.83 | 4.15 | 3.58 | 0.71 | 1.26 | 1.51 | 5.25 | 2.03 | 3.82 | 2.18 | 33.67 |
| 1950 | 3.73 | 4.57 | 3.71 | 3.23 | 1.85 | 1.88 | 2.67 | 4.56 | 1.84 | 2.22 | 8.21 | 3.55 | 42.02 |
| Av. 65 yrs. | 4.09 | 3.79 | 4.11 | 3.83 | 3.54 | 3.62 | 3.81 | 4.01 | 3.94 | 3.69 | 3.99 | 3.90 | 46.32 |

MONSON, MASS.—Elevation, 370 feet
Record: January, 1885, to December, 1911 — January, 1926, to December, 1950

| Year | Jan. | Feb. | Mar. | Apr. | May | June | July | Aug. | Sept. | Oct. | Nov. | Dec. | Annual |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1942 | 3.60 | 1.81 | 6.83 | 1.14 | 3.91 | 4.08 | 6.74 | 3.20 | 3.27 | 4.14 | 6.21 | 5.36 | 50.29 |
| 1943 | 2.81 | 1.06 | 3.53 | 3.64 | 5.78 | 3.32 | 5.21 | 1.08 | 0.82 | 4.29 | 4.98 | 0.79 | 37.31 |
| 1944 | 1.26 | 1.63 | 3.54 | 4.15 | 0.71 | 7.01 | 2.04 | 1.91 | 7.63 | 2.02 | 4.80 | 2.82 | 39.52 |
| 1945 | 2.53 | 3.56 | 2.08 | 3.96 | 5.26 | 6.84 | 5.67 | 7.56 | 1.52 | 2.42 | 4.61 | 5.40 | 51.41 |
| 1946 | 3.26 | 2.89 | 1.58 | 2.39 | 3.70 | 3.29 | 3.60 | 6.49 | 2.56 | 0.79 | 1.51 | 2.88 | 34.94 |
| 1947 | 2.98 | 3.11 | 2.66 | 4.71 | 2.02 | 3.20 | 4.64 | 1.27 | 2.34 | 2.19 | 3.92 | 2.85 | 35.89 |
| 1948 | 3.08 | 1.57 | 3.59 | 3.19 | 4.86 | 9.05 | 5.34 | 2.42 | 0.93 | 1.71 | 6.18 | 3.84 | 45.76 |
| 1949 | 3.50 | 3.28 | 1.55 | 2.80 | 4.43 | 0.64 | 3.00 | 4.34 | 1.42 | 1.73 | 2.15 | 3.71 | 32.55 |
| 1950 | 5.07 | 3.07 | 2.86 | 3.36 | 3.76 | 3.95 | 3.27 | 4.21 | 1.47 | 1.87 | 6.00 | 3.96 | 42.85 |
| Av. 52 yrs. | 3.58 | 3.34 | 3.72 | 3.24 | 3.48 | 3.72 | 4.26 | 4.34 | 3.72 | 3.27 | 3.74 | 3.64 | 44.05 |

MONTAGUE, MASS. (Montague City—U.S.W.B.)—Elevation, 100 feet
Record: January, 1939, to December, 1950

| Year | Jan. | Feb. | Mar. | Apr. | May | June | July | Aug. | Sept. | Oct. | Nov. | Dec. | Annual |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1939 | 2.68 | 2.93 | 4.15 | 4.57 | 1.70 | — | — | — | 2.19 | 3.97 | 0.87 | 3.29 | — |
| 1940 | 2.72 | 3.29 | 4.81 | 5.06 | 3.82 | 5.80 | 4.88 | 1.67 | 1.66 | 1.37 | 5.72 | 3.81 | 44.61 |
| 1941 | 2.51 | 2.04 | 2.50 | 0.72 | 2.03 | 2.36 | 3.31 | 1.68 | 1.85 | 1.79 | 4.23 | 3.39 | 28.41 |
| 1942 | 2.70 | 3.01 | 6.54 | 1.45 | 4.77 | 3.31 | 4.52 | 6.69 | 5.34 | 2.87 | 6.03 | 5.98 | 53.21 |
| 1943 | 2.68 | 1.84 | 3.40 | 3.77 | 7.19 | 1.93 | 5.71 | 2.88 | 2.20 | 4.30 | 5.25 | 0.57 | 41.72 |
| 1944 | 1.07 | 2.25 | 5.26 | 3.79 | 1.55 | 5.71 | 5.60 | 1.49 | 6.38 | 1.44 | 2.85 | 3.38 | 41.27 |
| 1945 | 3.91 | 3.90 | 1.80 | 6.77 | 7.97 | 6.59 | 5.35 | 1.96 | 3.29 | 2.34 | 3.37 | 4.06 | 51.31 |
| 1946 | — | — | — | — | — | 3.81 | 3.96 | 4.31 | 4.79 | 2.20 | 0.70 | 3.68 | — |
| 1947 | 4.03 | 2.97 | 2.83 | 3.88 | 4.52 | 3.53 | 3.28 | 3.31 | 3.83 | 2.39 | 6.59 | — | — |
| 1948 | 3.30 | 2.72 | 2.78 | 2.75 | 7.66 | 5.98 | 3.30 | 2.08 | 0.05 | 2.87 | 5.63 | — | — |
| 1949 | 4.18 | 3.19 | 2.13 | 3.46 | 3.58 | 2.27 | 1.70 | 3.71 | 3.22 | 2.58 | 2.13 | 2.37 | 34.52 |
| 1950 | 5.00 | 3.80 | 3.31 | 3.72 | 4.36 | 3.52 | 2.70 | 3.63 | 1.17 | 1.96 | 5.85 | 4.94 | 43.96 |
| Av. 8 yrs. | 3.10 | 2.92 | 3.72 | 3.59 | 4.41 | 3.94 | 4.22 | 2.96 | 3.14 | 2.39 | 4.43 | 3.56 | 42.38 |

MONTAGUE, MASS. (Turners Falls Co.)—Elevation, 200 feet
Record: January, 1892, to December, 1950

| Year | Jan. | Feb. | Mar. | Apr. | May | June | July | Aug. | Sept. | Oct. | Nov. | Dec. | Annual |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1942 | 3.26 | 2.03 | 6.57 | 1.16 | 4.80 | 3.87 | 4.85 | 4.39 | 5.29 | 3.24 | 5.40 | 6.20 | 51.06 |
| 1943 | 2.51 | 1.69 | 3.32 | 4.21 | 6.52 | 1.68 | 4.68 | 2.55 | 2.60 | 4.51 | 6.03 | 0.40 | 40.70 |
| 1944 | 1.32 | 2.36 | 5.11 | 3.44 | 1.22 | 5.76 | 9.93 | 2.55 | 6.58 | 1.75 | 3.73 | 2.59 | 46.34 |
| 1945 | 3.91 | 3.89 | 2.61 | 6.04 | 7.77 | 6.73 | 5.19 | 3.36 | 3.29 | 2.53 | 3.52 | 4.41 | 53.25 |
| 1946 | 2.92 | 3.23 | 1.46 | 2.42 | 6.17 | 3.70 | 4.42 | 4.22 | 5.59 | 1.61 | 0.94 | 3.66 | 40.34 |
| 1947 | 4.14 | 2.96 | 3.36 | 4.24 | 4.08 | 3.69 | 3.56 | 2.76 | 3.50 | 2.40 | 5.90 | 2.83 | 43.42 |
| 1948 | 2.70 | 2.76 | 3.09 | 3.32 | 7.00 | 6.30 | 2.31 | 1.84 | 1.33 | 1.77 | 5.06 | 2.88 | 40.36 |
| 1949 | 4.87 | 3.45 | 1.75 | 3.49 | 3.56 | 1.50 | 2.45 | 4.16 | 2.96 | 2.67 | 2.17 | 2.72 | 35.75 |
| 1950 | 5.64 | 3.81 | 2.95 | 3.80 | 3.82 | 3.63 | 2.50 | 4.46 | 1.86 | 1.68 | 5.60 | 4.69 | 44.44 |
| Av. 58 yrs. | 3.28 | 2.76 | 3.49 | 3.23 | 3.62 | 3.59 | 3.83 | 3.71 | 3.75 | 2.81 | 3.50 | 3.21 | 40.78 |

MONTAGUE, MASS. (Lake Pleasant Pumping Station)—Elevation, 280 feet
Record: August, 1937, to December, 1950

| Year | Jan. | Feb. | Mar. | Apr. | May | June | July | Aug. | Sept. | Oct. | Nov. | Dec. | Annual |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1942 | 2.68 | 1.69 | 6.37 | 1.35 | 3.36 | 3.59 | 5.12 | 6.22 | 4.79 | 4.13 | 4.61 | 5.14 | 49.05 |
| 1943 | 2.58 | 1.53 | 3.20 | 3.67 | 6.58 | 2.20 | 3.88 | 2.76 | 1.93 | 3.89 | 5.70 | 0.51 | 38.43 |
| 1944 | 1.56 | 2.30 | 3.92 | 3.88 | 1.78 | 5.60 | 7.24 | 2.48 | 5.04 | 1.95 | 3.97 | 3.08 | 42.80 |
| 1945 | 3.65 | 4.25 | 2.33 | 5.74 | 7.60 | 6.60 | 6.01 | 2.17 | 3.89 | 2.43 | 3.54 | 4.50 | 52.71 |
| 1946 | 3.03 | 3.91 | 1.13 | 2.29 | 6.68 | 4.01 | 4.56 | 5.61 | 5.67 | 1.30 | 0.65 | 3.75 | 42.59 |
| 1947 | 4.31 | 2.79 | 2.85 | 3.40 | 3.77 | 3.89 | 3.15 | 3.65 | 4.29 | 2.74 | 5.35 | 2.98 | 43.17 |
| 1948 | 2.91 | 2.38 | 3.05 | 2.48 | 6.90 | 6.77 | 3.74 | 1.85 | 1.40 | 0.92 | 5.32 | 2.83 | 40.55 |
| 1949 | 4.59 | 3.61 | 1.41 | 3.01 | 3.51 | 2.52 | 1.65 | 3.64 | 2.37 | 2.79 | 2.24 | 2.53 | 33.87 |
| 1950 | 4.95 | 4.03 | 2.40 | 4.05 | 3.71 | 3.71 | 2.10 | 3.28 | 1.34 | 1.70 | 5.37 | 4.15 | 40.79 |
| Av. 13 yrs. | 3.22 | 2.78 | 3.01 | 3.39 | 4.32 | 4.42 | 4.36 | 3.23 | 3.77 | 2.35 | 3.86 | 3.16 | 41.87 |

MONTGOMERY, MASS.—Elevation, 980 feet
Record: January, 1929, to December, 1950

| Year | Jan. | Feb. | Mar. | Apr. | May | June | July | Aug. | Sept. | Oct. | Nov. | Dec. | Annual |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1942 | 3.76 | 2.68 | 7.06 | 1.27 | 5.76 | 4.98 | 5.02 | 2.89 | 6.62 | 5.46 | 5.96 | 6.93 | 58.39 |
| 1943 | 3.21 | 1.62 | 4.07 | 3.73 | 7.26 | 4.48 | 7.08 | 1.36 | 3.25 | 8.89 | 5.27 | 0.77 | 50.99 |
| 1944 | 1.75 | 2.27 | 5.30 | 4.53 | 0.95 | 5.13 | 2.25 | 3.57 | 7.99 | 2.82 | 5.97 | 4.20 | 46.73 |
| 1945 | 3.31 | 3.80 | 2.42 | 6.08 | 8.19 | 6.75 | 8.21 | 3.88 | 5.30 | 2.63 | 4.46 | 4.58 | 59.61 |
| 1946 | 2.52 | 3.28 | 1.52 | 2.78 | 8.17 | 3.10 | 4.98 | 3.48 | 5.95 | 1.74 | 0.88 | 3.52 | 41.92 |
| 1947 | 3.64 | 2.84 | 4.48 | 5.05 | 5.78 | 3.55 | 4.57 | 2.68 | 3.53 | 4.99 | 7.41 | 2.63 | 51.15 |
| 1948 | 2.94 | 2.59 | 3.55 | 2.98 | 5.86 | 7.04 | 2.91 | 3.53 | 3.22 | 2.25 | 4.53 | 8.94 | 50.34 |
| 1949 | 5.21 | 3.39 | 1.40 | 4.25 | 4.61 | 0.48 | 4.01 | 4.95 | 4.26 | 2.49 | 2.17 | 2.74 | 39.96 |
| 1950 | 4.51 | 4.54 | 3.76 | 3.46 | 4.92 | 4.44 | 2.06 | 4.12 | 1.63 | 2.85 | 7.81 | 5.58 | 49.68 |
| Av. 22 yrs. | 3.59 | 2.86 | 3.85 | 3.88 | 4.57 | 4.64 | 4.00 | 3.76 | 4.70 | 3.75 | 4.26 | 3.72 | 47.58 |

NANTUCKET, MASS.—Elevation, 43 feet
Record: March, 1847, to December, 1859 — January, 1887, to December, 1950

| Year | Jan. | Feb. | Mar. | Apr. | May | June | July | Aug. | Sept. | Oct. | Nov. | Dec. | Annual |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1942 | 4.24 | 2.74 | 7.42 | 0.90 | 2.11 | 1.63 | 2.18 | 7.12 | 2.46 | 3.70 | 3.40 | 4.56 | 42.46 |
| 1943 | 4.48 | 3.76 | 4.57 | 2.82 | 4.00 | 1.33 | 4.10 | 4.03 | 3.54 | 3.72 | 3.59 | 1.10 | 40.95 |
| 1944 | 3.58 | 2.38 | 6.46 | 4.23 | 1.26 | 2.62 | 1.04 | 0.57 | 2.67 | 2.39 | 8.76 | 3.39 | 39.35 |
| 1945 | 4.38 | 5.07 | 1.84 | 1.80 | 3.44 | 5.65 | 3.97 | 1.72 | 0.69 | 2.97 | 6.38 | 6.59 | 44.50 |
| 1946 | 3.06 | 3.78 | 2.17 | 4.65 | 6.79 | 2.89 | 3.66 | 12.92 | 4.16 | 0.37 | 1.06 | 3.85 | 49.36 |
| 1947 | 2.32 | 2.88 | 2.06 | 6.07 | 5.52 | 2.95 | 2.63 | 0.28 | 3.02 | 1.13 | 3.28 | 2.87 | 35.01 |
| 1948 | 7.15 | 3.79 | 4.08 | 2.72 | 8.24 | 3.39 | 1.28 | 3.12 | 3.62 | 7.22 | 4.72 | 2.46 | 51.79 |
| 1949 | 3.70 | 4.17 | 3.34 | 4.45 | 1.78 | 0.01 | 0.87 | 1.95 | 3.53 | 3.23 | 4.13 | 2.59 | 33.75 |
| 1950 | 3.18 | 3.25 | 4.20 | 2.69 | 0.86 | 2.20 | 3.25 | 2.99 | 5.74 | 1.26 | 6.23 | 5.27 | 41.32 |
| Av. 76 yrs. | 3.85 | 3.28 | 3.82 | 3.39 | 3.06 | 2.95 | 2.71 | 3.28 | 3.02 | 3.58 | 3.47 | 3.91 | 40.32 |

NATICK, MASS. (Lake Cochituate)—Elevation, 140 feet
Record: January, 1852, to December, 1950

| Year | Jan. | Feb. | Mar. | Apr. | May | June | July | Aug. | Sept. | Oct. | Nov. | Dec. | Annual |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1942 | 5.12 | 3.15 | 8.39 | 1.90 | 2.51 | 3.13 | 8.27 | 2.44 | 2.22 | 3.71 | 6.36 | 7.58 | 54.78 |
| 1943 | 3.58 | 1.46 | 4.15 | 4.36 | 4.99 | 2.79 | 4.93 | 1.36 | 1.40 | 6.33 | 4.31 | 1.41 | 41.07 |
| 1944 | 2.23 | 3.01 | 4.69 | 4.82 | 0.91 | 6.25 | 2.56 | 1.90 | 6.99 | 2.67 | 7.42 | 3.46 | 46.91 |
| 1945 | 3.39 | 5.35 | 2.91 | 3.40 | 5.62 | 7.11 | 3.26 | 3.76 | 1.47 | 2.84 | 8.64 | 8.17 | 55.93 |
| 1946 | 3.98 | 3.47 | 1.92 | 3.47 | 5.90 | 3.75 | 1.63 | 9.34 | 3.41 | 0.44 | 1.41 | 4.70 | 43.42 |
| 1947 | 3.46 | 1.96 | 4.81 | 5.34 | 4.58 | 4.01 | 5.79 | 1.17 | 4.22 | 1.41 | 7.32 | 4.39 | 48.46 |
| 1948 | 6.14 | 2.67 | 3.81 | 3.14 | 5.97 | 4.63 | 5.83 | 1.36 | 0.78 | 3.65 | 6.67 | 1.63 | 46.28 |
| 1949 | 3.00 | 3.67 | 2.60 | 3.99 | 4.08 | 1.09 | 1.97 | 1.20 | 7.05 | 1.51 | 2.48 | 2.26 | 34.90 |
| 1950 | 4.37 | 4.54 | 3.92 | 3.39 | 1.86 | 1.94 | 2.52 | 5.42 | 1.63 | 2.04 | 7.11 | 4.17 | 42.91 |
| Av. 99 yrs. | 3.88 | 3.70 | 4.16 | 3.86 | 3.49 | 3.46 | 3.82 | 4.08 | 3.65 | 3.59 | 4.10 | 3.71 | 45.50 |

NASHUA RIVER, MASS. (Wachusett Reservoir Watershed)
Record: January, 1897, to December, 1950

| Year | Jan. | Feb. | Mar. | Apr. | May | June | July | Aug. | Sept. | Oct. | Nov. | Dec. | Annual |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1942 | 4.46 | 2.94 | 7.91 | 1.55 | 3.84 | 5.55 | 5.80 | 2.20 | 2.52 | 3.39 | 5.41 | 6.00 | 51.57 |
| 1943 | 3.78 | 1.85 | 3.59 | 3.93 | 5.70 | 1.96 | 4.31 | 2.23 | 1.44 | 5.67 | 5.26 | 0.77 | 40.49 |
| 1944 | 1.62 | 2.64 | 4.65 | 4.24 | 1.25 | 7.46 | 1.13 | 0.95 | 6.79 | 2.17 | 4.64 | 4.07 | 41.61 |
| 1945 | 3.84 | 4.50 | 2.47 | 4.21 | 5.39 | 6.17 | 5.12 | 3.72 | 2.33 | 2.15 | 5.49 | 6.22 | 51.61 |
| 1946 | 3.86 | 4.26 | 1.76 | 2.77 | 6.33 | 3.23 | 4.36 | 6.54 | 5.52 | 1.03 | 1.47 | 4.12 | 45.25 |
| 1947 | 3.38 | 2.72 | 3.77 | 5.31 | 3.64 | 3.20 | 4.18 | 1.91 | 3.68 | 1.22 | 5.91 | 3.60 | 42.52 |
| 1948 | 4.25 | 2.98 | 3.87 | 3.05 | 7.39 | 6.06 | 5.84 | 1.89 | 0.81 | 3.11 | 7.15 | 2.86 | 49.26 |
| 1949 | 4.40 | 3.42 | 1.89 | 4.55 | 3.75 | 0.60 | 2.21 | 3.42 | 2.53 | 2.22 | 2.54 | 3.38 | 34.91 |
| 1950 | 4.94 | 4.21 | 3.84 | 3.72 | 2.54 | 2.61 | 2.89 | 4.03 | 1.68 | 3.05 | 6.07 | 4.18 | 43.75 |
| Av. 54 yrs. | 3.86 | 3.65 | 4.05 | 3.87 | 3.51 | 3.91 | 3.94 | 3.78 | 3.84 | 3.13 | 3.92 | 3.88 | 45.34 |

NEEDHAM, MASS.—Elevation, 115 feet
Record: January, 1937, to December, 1950

| Year | Jan. | Feb. | Mar. | Apr. | May | June | July | Aug. | Sept. | Oct. | Nov. | Dec. | Annual |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1942 | 4.18 | 3.00 | 7.05 | 1.34 | 2.12 | 2.37 | 5.43 | 2.44 | 2.10 | 3.42 | 5.30 | 5.23 | 43.98 |
| 1943 | 3.13 | 1.36 | 3.59 | 3.34 | 4.46 | 1.96 | 4.88 | 1.20 | 1.44 | 5.19 | 2.67 | 1.29 | 34.51 |
| 1944 | 1.82 | 2.37 | 4.66 | 4.36 | 0.52 | 4.91 | 2.03 | 3.02 | 6.97 | 3.25 | 6.70 | 2.94 | 43.55 |
| 1945 | 2.99 | 4.56 | 2.09 | 2.65 | 5.52 | 6.58 | 2.14 | 3.67 | 1.29 | 3.15 | 7.58 | 6.40 | 48.62 |
| 1946 | 3.96 | 3.40 | 1.91 | 2.56 | 4.53 | 3.36 | 1.23 | 9.30 | 2.33 | 0.49 | 1.18 | 3.88 | 38.43 |
| 1947 | 2.69 | 1.28 | 3.33 | 4.84 | 4.32 | 3.37 | 6.04 | 2.33 | 4.46 | 1.22 | 6.16 | 4.06 | 44.10 |
| 1948 | 5.93 | 2.09 | 3.50 | 2.53 | 5.23 | 4.67 | 4.69 | 1.24 | 1.19 | 3.48 | 5.67 | 1.75 | 41.97 |
| 1949 | 3.58 | 3.06 | 1.29 | 4.20 | 3.54 | 0.49 | 1.83 | 5.18 | 3.77 | 1.32 | 3.08 | 2.15 | 33.49 |
| 1950 | 4.24 | 4.01 | 3.50 | 3.13 | 1.92 | 2.25 | 1.84 | 3.44 | 1.55 | 1.83 | 6.10 | 3.65 | 37.46 |
| Av. 14 yrs. | 3.50 | 2.80 | 3.43 | 3.36 | 3.28 | 3.58 | 3.61 | 3.46 | 2.79 | 2.63 | 4.52 | 3.35 | 40.31 |

NEW BEDFORD, MASS. (Clifford)—Elevation, 100 feet
Record: January, 1814, to December, 1950

| Year | Jan. | Feb. | Mar. | Apr. | May | June | July | Aug. | Sept. | Oct. | Nov. | Dec. | Annual |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1942 | 4.77 | 3.75 | 8.08 | 0.95 | 1.40 | 2.13 | 2.58 | 6.74 | 2.67 | 5.39 | 5.76 | 4.12 | 48.34 |
| 1943 | 4.56 | 2.15 | 3.61 | 3.50 | 3.58 | 1.65 | 2.71 | 2.80 | 2.47 | 4.43 | 3.30 | 1.54 | 36.30 |
| 1944 | 2.94 | 2.50 | 4.82 | 4.55 | 0.84 | 4.01 | 0.59 | 2.39 | 5.22 | 2.23 | 9.30 | 3.30 | 42.69 |
| 1945 | 4.57 | 3.86 | 2.20 | 2.72 | 4.26 | 3.93 | 1.16 | 2.43 | 1.46 | 4.20 | 9.92 | 7.68 | 48.39 |
| 1946 | 4.06 | 2.75 | 1.66 | 2.35 | 5.32 | 3.28 | 1.70 | 12.51 | 2.79 | 0.71 | 1.20 | 3.73 | 42.06 |
| 1947 | 3.15 | 1.29 | 2.13 | 6.40 | 3.76 | 3.55 | 4.03 | 1.05 | 4.11 | 3.00 | 4.10 | 4.56 | 41.13 |
| 1948 | 6.52 | 2.87 | 4.39 | 4.61 | 10.26 | 2.81 | 3.11 | 1.39 | 2.72 | 6.72 | 5.17 | 2.71 | 53.28 |
| 1949 | 4.46 | 4.50 | 3.34 | 5.55 | 4.26 | 0.01 | 0.93 | 2.52 | 1.94 | 1.01 | 3.46 | 2.96 | 34.94 |
| 1950 | 4.45 | 4.91 | 4.22 | 3.45 | 3.54 | 3.37 | 0.95 | 3.22 | 1.63 | 1.02 | 7.36 | 4.35 | 42.47 |
| Av. 137 yrs. | 4.08 | 3.79 | 4.25 | 3.99 | 3.81 | 3.22 | 3.23 | 4.16 | 3.48 | 3.78 | 4.20 | 4.09 | 46.08 |

NEW BEDFORD, MASS. (City Hall)—Elevation, 100 feet
Record: January, 1903, to December, 1950

| Year | Jan. | Feb. | Mar. | Apr. | May | June | July | Aug. | Sept. | Oct. | Nov. | Dec. | Annual |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1942 | 2.81 | 4.01 | 6.96 | 0.91 | 1.47 | 2.06 | 2.61 | 7.59 | 2.91 | 4.78 | 6.05 | 3.84 | 46.00 |
| 1943 | 2.97 | 2.09 | 3.27 | 2.62 | 4.41 | 1.05 | 2.67 | 2.47 | 2.01 | 2.57 | 2.34 | 1.45 | 29.92 |
| 1944 | 3.28 | 1.77 | 4.20 | 4.39 | 0.79 | 2.12 | 0.62 | 1.25 | 4.11 | 2.09 | 8.94 | 2.65 | 36.21 |
| 1945 | 4.08 | 3.80 | 2.27 | 1.74 | 3.81 | 3.29 | 1.04 | 3.21 | 1.33 | 4.21 | 8.35 | 7.52 | 44.65 |
| 1946 | 4.45 | 3.06 | 1.63 | 2.95 | 5.03 | 2.79 | 0.79 | 12.97 | 2.87 | 0.69 | 0.84 | 4.18 | 42.25 |
| 1947 | 3.15 | 1.25 | 2.20 | 5.61 | 4.04 | 2.28 | 3.37 | 1.22 | 1.92 | 4.55 | 3.29 | 3.19 | 36.07 |
| 1948 | 6.57 | 3.52 | 3.91 | 3.97 | 9.80 | 2.53 | 2.69 | 1.01 | 1.98 | 6.71 | 4.36 | 2.68 | 49.73 |
| 1949 | 5.11 | 4.01 | 4.21 | 4.03 | 3.40 | 0.01 | 1.27 | 2.06 | 2.39 | 0.78 | 3.61 | 2.35 | 33.23 |
| 1950 | 3.73 | 4.12 | 4.25 | 3.11 | 3.04 | 1.73 | 1.09 | 1.86 | 1.72 | 0.97 | 5.94 | 3.93 | 35.49 |
| Av. 45 yrs. | 3.79 | 3.06 | 3.60 | 3.63 | 3.01 | 3.19 | 2.76 | 3.93 | 3.06 | 3.11 | 3.54 | 3.44 | 40.12 |

NEW BEDFORD, MASS. (Clark's Point)—Elevation, 10 feet
Record: December, 1930, to December, 1950

| Year | Jan. | Feb. | Mar. | Apr. | May | June | July | Aug. | Sept. | Oct. | Nov. | Dec. | Annual |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1942 | 4.47 | 2.88 | 7.57 | 0.70 | 1.77 | 2.36 | 2.73 | 7.39 | 2.72 | 4.40 | 5.60 | 4.25 | 46.84 |
| 1943 | 2.76 | 2.44 | 3.93 | 3.20 | 3.87 | 0.97 | 2.38 | 3.49 | 2.03 | 2.28 | 2.68 | 1.44 | 31.47 |
| 1944 | 3.69 | 2.86 | 4.89 | 5.43 | 1.10 | 2.76 | 0.64 | 1.61 | 3.86 | 2.06 | 9.24 | 3.66 | 41.80 |
| 1945 | 3.96 | 3.47 | 2.24 | 1.52 | 3.63 | 2.85 | 1.38 | 2.86 | 1.20 | 4.70 | 8.97 | 6.97 | 43.75 |
| 1946 | 4.02 | 3.48 | 1.70 | 3.09 | 5.16 | 2.92 | 1.13 | 11.28 | 2.06 | 0.31 | 0.90 | 4.05 | 40.10 |
| 1947 | 3.03 | 1.27 | 2.57 | 7.32 | 2.74 | 3.13 | 4.02 | 1.17 | 2.10 | 4.26 | 3.22 | 3.09 | 37.92 |
| 1948 | 5.62 | 2.72 | 3.76 | 4.74 | 8.76 | 2.79 | 2.91 | 1.00 | 2.79 | 5.64 | 4.13 | 2.33 | 47.19 |
| 1949 | 4.28 | 5.33 | 1.92 | 4.24 | 4.03 | 0.02 | 1.11 | 1.89 | 3.12 | 1.10 | 3.56 | 2.68 | 33.28 |
| 1950 | 3.39 | 4.28 | 3.58 | 3.59 | 3.70 | 1.60 | 1.08 | 2.35 | 1.51 | 1.04 | 6.26 | 4.27 | 36.65 |
| Av. 20 yrs. | 4.05 | 3.09 | 4.07 | 3.94 | 3.25 | 3.35 | 2.03 | 3.76 | 3.62 | 3.14 | 4.19 | 3.68 | 42.17 |

NEW BRAINTREE, MASS.—Elevation, 980 feet
Record: May, 1929, to December, 1950

| Year | Jan. | Feb. | Mar. | Apr. | May | June | July | Aug. | Sept. | Oct. | Nov. | Dec. | Annual |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1942 | 3.09 | 1.33 | 5.93 | 0.69 | 3.91 | 4.37 | 4.24 | 1.96 | 2.31 | 3.40 | 4.05 | 4.27 | 39.55 |
| 1943 | 1.96 | 1.08 | 2.89 | 3.24 | 6.08 | 2.15 | 5.00 | 2.30 | 1.07 | 5.29 | 4.48 | 0.59 | 36.13 |
| 1944 | 0.81 | 1.52 | 3.22 | 3.89 | 1.32 | 6.61 | 3.00 | 1.07 | 6.35 | 1.41 | 1.99 | 2.33 | 33.52 |
| 1945 | 1.91 | 2.37 | 1.24 | 3.63 | 4.47 | 7.22 | 5.70 | 3.41 | 1.96 | 2.77 | 3.43 | 3.89 | 42.00 |
| 1946 | 2.40 | 2.92 | 1.60 | 2.16 | 4.34 | 3.94 | 4.29 | 5.27 | 5.20 | 0.86 | 1.57 | 2.88 | 37.43 |
| 1947 | 2.75 | 2.10 | 2.02 | 4.47 | 2.73 | 2.56 | 5.02 | 0.89 | 2.29 | 1.16 | 5.37 | 2.44 | 33.80 |
| 1948 | 2.74 | 2.20 | 2.10 | 3.08 | 5.69 | 6.19 | 6.90 | 2.27 | 1.82 | 1.48 | 6.07 | 2.29 | 42.83 |
| 1949 | 3.72 | 2.47 | 1.34 | 2.92 | 4.46 | 0.74 | 2.54 | 3.60 | 1.96 | 2.57 | 2.03 | 3.32 | 31.67 |
| 1950 | 4.18 | 2.94 | 2.39 | 3.37 | 2.96 | 3.76 | 3.56 | 2.92 | 1.74 | 1.68 | 5.86 | 3.83 | 39.19 |
| Av. 21 yrs. | 2.76 | 2.11 | 3.01 | 2.86 | 3.37 | 3.97 | 3.94 | 3.35 | 4.03 | 2.44 | 3.15 | 2.68 | 37.67 |

NEWBURYPORT, MASS.—Elevation, 20 feet
Record: Plum Island, January, 1913, to September, 1931, inclusive
Water Works Pumping Station, October, 1931, to December, 1950

| Year | Jan. | Feb. | Mar. | Apr. | May | June | July | Aug. | Sept. | Oct. | Nov. | Dec. | Annual |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1942 | 4.01 | 3.80 | 6.97 | 1.53 | 2.61 | 2.92 | 7.82 | 1.61 | 1.53 | 2.81 | 4.72 | 5.74 | 46.07 |
| 1943 | 2.23 | 1.61 | 3.32 | 3.03 | 4.71 | 2.08 | 5.78 | 2.34 | 1.08 | 5.98 | 5.07 | 0.96 | 38.19 |
| 1944 | 2.94 | 2.12 | 4.00 | 3.39 | 1.13 | 4.93 | 3.20 | 1.16 | 10.70 | 2.92 | 6.09 | 3.56 | 46.14 |
| 1945 | 2.56 | 4.96 | 1.96 | 3.17 | 5.34 | 5.71 | 4.25 | 2.68 | 1.43 | 2.73 | 6.93 | 6.55 | 48.27 |
| 1946 | 4.12 | 2.80 | 1.49 | 2.86 | 6.52 | 2.37 | 1.53 | 10.31 | 2.36 | 0.60 | 1.07 | 4.29 | 40.32 |
| 1947 | 2.74 | 1.16 | 3.68 | 3.80 | 3.69 | 3.40 | 5.42 | 1.39 | 3.68 | 0.07 | 6.43 | 4.55 | 40.01 |
| 1948 | 5.36 | 2.23 | 2.38 | 3.10 | 5.03 | 5.00 | 3.69 | 1.36 | 0.50 | 2.07 | 5.83 | 1.84 | 38.39 |
| 1949 | 2.95 | 2.37 | 0.93 | 5.62 | 3.32 | 0.65 | 1.17 | 3.89 | 4.18 | 2.19 | 3.61 | 1.72 | 33.10 |
| 1950 | 4.43 | 2.83 | 3.49 | 1.95 | 1.41 | 1.76 | 3.80 | 4.28 | 1.46 | 4.98 | 6.05 | 3.57 | 40.01 |
| Av. 38 yrs. | 3.24 | 2.78 | 3.30 | 3.55 | 3.05 | 3.45 | 3.81 | 2.95 | 3.34 | 2.95 | 3.62 | 3.33 | 39.37 |

NEW SALEM, MASS. (South New Salem)—Elevation, 750 feet
Record: August, 1919, to December, 1950

| Year | Jan. | Feb. | Mar. | Apr. | May | June | July | Aug. | Sept. | Oct. | Nov. | Dec. | Annual |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1940 | 2.82 | 2.65 | 5.60 | 6.85 | 7.09 | 3.50 | 4.36 | 2.47 | 3.34 | 1.37 | — | — | — |
| 1941 | — | — | — | — | — | 5.17 | — | — | 1.12 | 2.94 | 3.39 | 4.06 | — |
| 1942 | 3.93 | 1.63 | 7.20 | 0.99 | 3.55 | 5.60 | 4.47 | 2.47 | 4.04 | 4.29 | 4.58 | 6.28 | 49.03 |
| 1943 | 2.57 | 1.73 | 3.08 | 3.88 | 5.60 | 1.85 | 3.59 | 4.81 | 1.53 | 5.32 | 5.49 | 0.54 | 39.99 |
| 1944 | 1.28 | 2.29 | 4.93 | 4.44 | 1.00 | 8.44 | 4.66 | 1.93 | 5.52 | 1.91 | 3.76 | 2.20 | 42.36 |
| 1945 | 2.29 | 3.30 | 1.86 | 6.32 | 6.48 | 10.24 | 7.01 | 2.98 | 2.95 | 2.83 | 3.86 | 4.45 | 54.57 |
| 1946 | 2.54 | 3.37 | 1.98 | 2.46 | 6.64 | 3.50 | 4.09 | 4.34 | 5.15 | 1.52 | 0.92 | 3.47 | 39.98 |
| 1947 | 3.47 | 1.83 | 2.59 | 4.16 | 3.72 | 3.90 | 3.21 | 1.30 | 4.35 | 1.29 | 5.60 | 2.13 | 37.55 |
| 1948 | 2.13 | 2.17 | 3.88 | 3.10 | 6.11 | 6.25 | 3.55 | 1.96 | 1.96 | 1.28 | 6.20 | 2.86 | 41.45 |
| 1949 | 4.61 | 3.39 | 1.48 | 3.32 | 5.72 | 0.98 | 3.01 | 2.79 | 3.06 | 2.46 | 1.87 | 3.62 | 36.31 |
| 1950 | 4.75 | 3.71 | 2.58 | 4.19 | 3.82 | 4.91 | 2.45 | 4.79 | 1.62 | 2.59 | 5.96 | 4.57 | 45.94 |
| Av. 27 yrs. | 3.34 | 2.66 | 3.50 | 3.71 | 3.94 | 4.94 | 4.04 | 3.97 | 4.29 | 3.04 | 4.17 | 3.33 | 44.95 |

NEW SALEM, MASS. (North New Salem)—Elevation, 590 feet
Record: November, 1941, to December, 1950

| Year | Jan. | Feb. | Mar. | Apr. | May | June | July | Aug. | Sept. | Oct. | Nov. | Dec. | Annual |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1941 | — | — | — | — | — | — | — | — | — | — | 3.04 | 3.63 | — |
| 1942 | 3.64 | 2.05 | 8.07 | 1.15 | 3.23 | 4.35 | 5.40 | 2.20 | 3.60 | 3.94 | 5.93 | 6.18 | 49.74 |
| 1943 | 2.62 | 1.70 | 3.25 | 3.77 | 5.94 | 2.63 | 4.84 | 2.98 | 1.96 | 6.04 | 5.70 | 0.69 | 42.12 |
| 1944 | 1.10 | 2.57 | 4.55 | 3.64 | 1.30 | 8.44 | 3.81 | 0.89 | 5.67 | 2.18 | 4.04 | 2.74 | 40.93 |
| 1945 | 3.29 | 3.70 | 2.09 | 5.84 | 6.90 | 8.32 | 8.33 | 3.16 | 3.35 | 3.24 | 4.83 | 3.90 | 56.95 |
| 1946 | 3.13 | 3.43 | 1.71 | 3.08 | 6.47 | 4.76 | 5.15 | 4.52 | 5.45 | 1.61 | 1.10 | 3.95 | 44.36 |
| 1947 | 4.04 | 2.46 | 3.97 | 4.65 | 4.75 | 4.58 | 3.92 | 6.59 | 4.10 | 1.41 | 6.88 | 2.76 | 50.11 |
| 1948 | 3.27 | 2.26 | 3.89 | 4.11 | 7.64 | 6.27 | 4.38 | 1.69 | 1.68 | 1.59 | 6.88 | 3.32 | 46.98 |
| 1949 | 5.63 | 3.80 | 1.70 | 3.48 | 5.41 | 1.57 | 3.15 | 2.95 | 4.03 | 3.11 | 2.42 | 3.96 | 41.21 |
| 1950 | 5.44 | 4.23 | 2.67 | 4.09 | 3.51 | 5.22 | 2.37 | 4.56 | 1.48 | 2.43 | 7.00 | 4.26 | 47.36 |
| Av. 9 yrs. | 3.57 | 2.91 | 3.54 | 3.76 | 5.02 | 5.13 | 4.59 | 3.28 | 3.48 | 2.84 | 4.98 | 3.54 | 46.64 |

NEWTON, MASS. (Water Works Pumping Station)—Elevation, 100 feet
Record: January, 1908, to December, 1950

| Year | Jan. | Feb. | Mar. | Apr. | May | June | July | Aug. | Sept. | Oct. | Nov. | Dec. | Annual |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1942 | 4.45 | 2.94 | 6.96 | 1.57 | 1.82 | 3.08 | 5.36 | 2.61 | 2.22 | 3.46 | 4.91 | 5.28 | 44.66 |
| 1943 | 3.48 | 1.26 | 3.76 | 3.11 | 5.01 | 2.56 | 4.70 | 1.08 | 1.74 | 4.61 | 3.01 | 1.24 | 35.56 |
| 1944 | 1.66 | 2.39 | 4.13 | 3.56 | 0.76 | 5.40 | 2.08 | 1.98 | 6.95 | 3.41 | 5.21 | 3.21 | 40.74 |
| 1945 | 3.40 | 4.64 | 2.28 | 2.69 | 5.25 | 7.99 | 2.44 | 3.17 | 1.54 | 2.99 | 8.47 | 6.46 | 51.32 |
| 1946 | 4.06 | 3.13 | 1.79 | 2.74 | 5.36 | 3.50 | 2.67 | 9.98 | 2.77 | 0.60 | 1.28 | 4.11 | 41.99 |
| 1947 | 2.70 | 1.33 | 3.53 | 5.06 | 4.61 | 3.32 | 5.07 | 2.43 | 4.18 | 1.45 | 6.79 | 3.98 | 44.45 |
| 1948 | 5.08 | 2.07 | 3.58 | 2.83 | 5.65 | 4.13 | 5.60 | 1.36 | 1.27 | 4.09 | 6.15 | 1.51 | 43.32 |
| 1949 | 3.41 | 3.24 | 1.34 | 5.10 | 3.88 | 1.04 | 1.52 | 4.73 | 3.92 | 1.72 | 3.69 | 2.01 | 35.90 |
| 1950 | 4.54 | 3.78 | 3.41 | 3.40 | 2.37 | 1.97 | 3.07 | 4.43 | 1.41 | 2.15 | 6.60 | 2.99 | 40.12 |
| Av. 43 yrs. | 3.69 | 3.21 | 3.64 | 3.75 | 3.09 | 3.54 | 3.53 | 3.66 | 3.38 | 2.93 | 3.64 | 3.44 | 41.50 |

NORTH ADAMS, MASS. (Notch Brook Reservoir)—Elevation, 1,200 feet
Record: January, 1900, to December, 1950

| Year | Jan. | Feb. | Mar. | Apr. | May | June | July | Aug. | Sept. | Oct. | Nov. | Dec. | Annual |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1942 | 2.36 | 1.38 | 7.12 | 2.10 | 3.75 | 2.14 | 6.59 | 1.29 | 5.26 | 4.39 | 5.75 | 5.67 | 47.80 |
| 1943 | 2.53 | 1.82 | 3.13 | 5.55 | 8.03 | 2.80 | 6.52 | 3.88 | 1.07 | 3.96 | 7.31 | 0.97 | 47.57 |
| 1944 | 1.75 | 2.53 | 4.93 | 4.55 | 1.84 | 4.57 | 6.00 | 1.43 | 6.01 | 2.36 | 3.87 | 2.24 | 42.08 |
| 1945 | 4.81 | 4.30 | 2.08 | 6.59 | 5.14 | 7.23 | 8.69 | 2.69 | 5.04 | 4.00 | 5.84 | 1.43 | 57.94 |
| 1946 | 3.32 | 3.90 | 1.98 | 3.48 | 7.86 | 3.75 | 3.24 | 3.52 | 6.62 | 2.75 | 1.68 | 3.44 | 45.54 |
| 1947 | 4.62 | 5.11 | 4.67 | 5.71 | 4.73 | 4.72 | 4.12 | 2.07 | 4.25 | 1.55 | 4.25 | 2.52 | 48.32 |
| 1948 | 2.55 | 3.22 | 3.40 | 5.22 | 7.17 | 6.12 | 2.47 | 1.71 | 2.21 | 1.09 | 6.09 | 8.53 | 49.78 |
| 1949 | 4.99 | 3.55 | 2.55 | 3.98 | 4.45 | 2.14 | 3.29 | 2.51 | 3.44 | 2.63 | 2.01 | 3.93 | 39.47 |
| 1950 | 6.12 | 5.14 | 3.65 | 3.52 | 4.73 | 2.62 | 4.09 | 4.36 | 3.36 | 1.64 | 7.34 | 3.34 | 49.91 |
| Av. 51 yrs. | 3.30 | 3.05 | 3.46 | 3.53 | 3.41 | 3.59 | 3.82 | 3.36 | 3.56 | 2.89 | 3.50 | 3.06 | 40.53 |

NORTH ADAMS, MASS. (Broad Brook Reservoir)—Elevation, 900 feet*
Record: January, 1900, to December, 1950

| Year | Jan. | Feb. | Mar. | Apr. | May | June | July | Aug. | Sept. | Oct. | Nov. | Dec. | Annual |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1942 | 1.73 | 2.03 | 4.87 | 2.05 | 3.72 | 1.79 | 6.60 | 1.23 | 4.50 | 3.00 | 5.23 | 5.69 | 42.49 |
| 1943 | 2.50 | 1.97 | 1.31 | 3.72 | 5.21 | 2.49 | 3.34 | 5.25 | 0.79 | 3.44 | 6.46 | 0.33 | 37.31 |
| 1944 | 1.54 | 2.35 | 3.68 | 2.94 | 1.41 | 4.01 | 3.91 | 2.57 | 6.34 | 2.95 | 3.01 | 3.10 | 37.81 |
| 1945 | 3.54 | 1.92 | 1.13 | 3.78 | 5.87 | 5.81 | 6.04 | 2.43 | 3.43 | 3.61 | 4.92 | 1.57 | 44.05 |
| 1946 | 2.15 | 3.08 | 1.94 | 1.50 | 5.52 | 3.74 | 1.78 | 2.83 | 4.56 | 1.96 | 1.83 | 1.97 | 32.86 |
| 1947 | 3.81 | 2.33 | 3.92 | 3.54 | 3.41 | 3.95 | 3.95 | 1.95 | 1.44 | 0.64 | 4.14 | 1.81 | 34.89 |
| 1948 | 1.91 | 1.31 | 4.09 | 2.82 | 6.38 | 4.45 | 3.82 | 2.06 | 1.17 | 1.48 | 4.92 | 7.88 | 42.29 |
| 1949 | 2.58 | 2.33 | 2.03 | 2.90 | 3.64 | 2.05 | 4.04 | 3.02 | 4.55 | 2.00 | 1.31 | 2.93 | 33.38 |
| 1950 | 4.24 | 2.98 | 2.31 | 3.05 | 3.05 | 3.45 | 3.98 | 2.77 | 3.51 | 1.21 | 6.67 | 2.84 | 40.06 |
| Av. 51 yrs. | 2.94 | 2.48 | 3.28 | 3.31 | 3.29 | 3.84 | 4.18 | 3.73 | 3.67 | 2.97 | 3.31 | 3.07 | 40.07 |

*Gage at Pownal, Vt.

NORTH ANDOVER, MASS.—Elevation, 100 feet
Record: May, 1911, to December, 1950

| Year | Jan. | Feb. | Mar. | Apr. | May | June | July | Aug. | Sept. | Oct. | Nov. | Dec. | Annual |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1942 | 4.16 | 2.67 | 7.20 | 1.85 | 3.18 | 2.23 | 6.07 | 1.57 | 1.38 | 3.09 | 5.66 | 5.34 | 44.40 |
| 1943 | 3.24 | 1.11 | 2.91 | 2.82 | 4.75 | 1.74 | 5.27 | 2.17 | 0.73 | 5.36 | 4.77 | 0.91 | 35.78 |
| 1944 | 3.46 | 2.28 | 3.94 | 3.18 | 0.91 | 5.36 | 3.34 | 1.78 | 7.66 | 2.56 | 7.03 | 3.95 | 45.45 |
| 1945 | 2.95 | 4.79 | 2.60 | 3.20 | 4.29 | 5.95 | 5.15 | 3.16 | 1.37 | 2.48 | 8.52 | 6.67 | 51.13 |
| 1946 | 4.10 | 3.04 | 1.51 | 3.01 | 5.60 | 3.77 | 1.63 | 8.44 | 2.46 | 0.58 | 1.01 | 3.92 | 39.07 |
| 1947 | 2.66 | 1.54 | 3.35 | 5.38 | 2.56 | 2.85 | 5.88 | 1.32 | 3.21 | 0.45 | 5.63 | 4.17 | 39.00 |
| 1948 | 6.02 | 2.24 | 2.86 | 2.98 | 4.89 | 7.28 | 3.47 | 1.27 | 0.30 | 3.19 | 5.85 | 2.00 | 42.35 |
| 1949 | 3.73 | 3.33 | 1.20 | 4.08 | 3.77 | 0.53 | 1.62 | 5.82 | 4.58 | 1.84 | 3.20 | 1.89 | 35.59 |
| 1950 | 4.90 | 3.50 | 4.01 | 2.31 | 1.29 | 0.76 | 1.95 | 3.66 | 1.51 | 3.71 | 5.32 | 3.57 | 36.49 |
| Av. 39 yrs. | *3.35 | 2.79 | 3.45 | 3.76 | 3.07 | 3.51 | 3.69 | 3.36 | 3.35 | 3.02 | 3.80 | 3.43 | 40.58 |

NORTHBRIDGE, MASS. (Whitinsville)—Elevation, 350 feet
Record: January, 1872, to December, 1950

| Year | Jan. | Feb. | Mar. | Apr. | May | June | July | Aug. | Sept. | Oct. | Nov. | Dec. | Annual |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1942 | 4.32 | 2.87 | 7.68 | 1.14 | 2.25 | 4.49 | 4.73 | 2.50 | 1.56 | 3.80 | 4.83 | 9.01 | 49.18 |
| 1943 | 3.59 | 1.52 | 4.58 | 3.57 | 5.24 | 2.10 | 5.32 | 0.98 | 0.96 | 5.13 | 4.08 | 1.16 | 38.23 |
| 1944 | 1.72 | 2.52 | 5.01 | 4.85 | 0.91 | 4.20 | 2.63 | 2.20 | 8.78 | 2.87 | 6.22 | 3.71 | 45.62 |
| 1945 | 3.27 | 4.90 | 2.45 | 3.07 | 5.97 | 5.94 | 3.97 | 3.90 | 1.58 | 2.41 | 7.68 | 6.94 | 52.08 |
| 1946 | 3.29 | 3.51 | 1.59 | 2.29 | 6.02 | 4.55 | 1.70 | 9.08 | 4.36 | 0.53 | 1.37 | 4.19 | 42.48 |
| 1947 | 2.85 | 2.14 | 3.69 | 4.79 | 3.53 | 4.28 | 5.46 | 1.70 | 2.81 | 1.63 | 4.86 | 3.68 | 41.42 |
| 1948 | 5.00 | 1.97 | 4.03 | 3.32 | 6.14 | 4.33 | 5.22 | 1.55 | 0.71 | 3.37 | 6.28 | 2.60 | 44.52 |
| 1949 | 3.87 | 3.40 | 1.95 | 3.78 | 4.21 | 0.36 | 2.61 | 5.32 | 2.98 | 1.66 | 2.73 | 2.47 | 35.34 |
| 1950 | 4.53 | 4.63 | 3.99 | 3.95 | 2.50 | 2.55 | 3.38 | 5.21 | 1.25 | 2.67 | 6.17 | 3.93 | 44.76 |
| Av. 79 yrs. | 3.87 | 3.61 | 4.17 | 3.65 | 3.38 | 3.43 | 3.76 | 4.18 | 3.46 | 3.52 | 3.96 | 3.71 | 44.70 |

NORTHFIELD, MASS. (Northfield Schools)—Elevation, 380 feet
Record: June, 1931, to December, 1950

| Year | Jan. | Feb. | Mar. | Apr. | May | June | July | Aug. | Sept. | Oct. | Nov. | Dec. | Annual |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1942 | 3.19 | 1.90 | 5.30 | 1.48 | 4.05 | 2.82 | 6.19 | 1.94 | 3.38 | 4.40 | 4.09 | 5.09 | 43.83 |
| 1943 | 2.62 | 1.90 | 3.26 | 3.94 | 5.81 | 2.30 | 4.41 | 3.62 | 3.22 | 4.44 | 5.31 | 0.55 | 41.38 |
| 1944 | 1.69 | 2.22 | 4.61 | 3.46 | 0.88 | 5.44 | 5.86 | 2.30 | 8.23 | 2.12 | 3.59 | 2.61 | 43.01 |
| 1945 | 3.86 | 3.52 | 2.11 | 6.07 | 6.84 | 6.17 | 5.54 | 3.45 | 2.22 | 3.08 | 3.40 | 4.33 | 50.59 |
| 1946 | 3.43 | 3.47 | 1.08 | 2.26 | 6.57 | 3.03 | 5.05 | 5.72 | 5.13 | 1.29 | 0.83 | 4.03 | 41.89 |
| 1947 | 3.89 | 2.61 | 3.31 | 4.21 | 3.87 | 3.77 | 4.25 | 1.51 | 3.52 | 2.17 | 5.08 | 2.97 | 41.16 |
| 1948 | 2.33 | 2.85 | 3.58 | 3.00 | 7.12 | 6.01 | 2.54 | 2.24 | 0.71 | 1.18 | 5.67 | 2.97 | 40.20 |
| 1949 | 3.82 | 3.18 | 1.67 | 4.17 | 3.27 | 1.43 | 3.53 | 2.97 | 3.04 | 2.57 | 1.96 | 2.15 | 33.76 |
| 1950 | 5.06 | 4.47 | 2.09 | 4.69 | 4.08 | 3.60 | 2.65 | 7.58 | 1.41 | 1.95 | 5.83 | 4.25 | 47.66 |
| Av. 19 yrs. | 3.64 | 2.76 | 3.47 | 3.64 | 3.76 | 3.84 | 3.99 | 3.43 | 4.26 | 2.71 | 3.78 | 3.27 | 42.55 |

NORWOOD, MASS. (Ellis Station)—Elevation, 90 feet
Record: January, 1913, to December, 1950

| Year | Jan. | Feb. | Mar. | Apr. | May | June | July | Aug. | Sept. | Oct. | Nov. | Dec. | Annual |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1942 | 3.58 | 2.94 | 7.16 | 1.43 | 2.18 | 2.35 | 6.43 | 2.59 | 2.34 | 3.36 | 4.19 | 5.21 | 43.76 |
| 1943 | 3.26 | 1.28 | 3.32 | 2.84 | 4.35 | 1.65 | 3.49 | 0.92 | 1.06 | 4.53 | 2.76 | 1.10 | 30.56 |
| 1944 | 1.96 | 2.29 | 4.41 | 3.68 | 0.39 | 4.42 | 3.51 | 2.79 | 7.53 | 2.56 | 5.34 | 2.72 | 41.60 |
| 1945 | 2.87 | 3.99 | 1.92 | 2.46 | 5.04 | 5.58 | 3.54 | 3.84 | 1.76 | 2.50 | 7.96 | 6.31 | 47.27 |
| 1946 | 3.51 | 3.34 | 1.66 | 2.13 | 4.86 | 3.72 | 1.23 | 10.71 | 3.16 | 0.28 | 1.11 | 3.67 | 39.54 |
| 1947 | 2.45 | 1.24 | 2.87 | 5.07 | 4.96 | 4.67 | 4.59 | 1.21 | 3.87 | 1.39 | 5.82 | 4.01 | 42.15 |
| 1948 | 5.21 | 1.86 | 3.12 | 2.66 | 5.66 | 5.29 | 5.76 | 1.29 | 1.21 | 5.08 | 5.66 | 1.40 | 44.20 |
| 1949 | 3.23 | 3.56 | 1.52 | 4.42 | 3.69 | 0.42 | 0.81 | 5.96 | 3.97 | 1.56 | 4.22 | 1.76 | 34.92 |
| 1950 | 3.59 | 3.91 | 3.10 | 2.76 | 1.64 | 1.71 | 3.02 | 3.82 | 1.54 | 1.66 | 6.64 | 3.39 | 36.78 |
| Av. 38 yrs. | 3.30 | 2.80 | 3.38 | 3.69 | 3.21 | 3.71 | 3.88 | 4.08 | 3.49 | 3.06 | 3.56 | 3.29 | 41.45 |

OTIS, MASS. (West Otis)—Elevation, 1,400 feet
Record: January, 1913, to December, 1950

| Year | Jan. | Feb. | Mar. | Apr. | May | June | July | Aug. | Sept. | Oct. | Nov. | Dec. | Annual |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1942 | 3.13 | 1.47 | 5.72 | 1.29 | 4.50 | 6.15 | 7.50 | 2.26 | 5.56 | 5.70 | 4.70 | 5.11 | 53.09 |
| 1943 | 3.50 | 1.54 | 3.01 | 3.01 | 5.85 | 3.03 | 4.92 | 2.66 | 2.25 | 4.78 | 2.22 | 0.72 | 37.49 |
| 1944 | 1.30 | 1.26 | 3.76 | 3.79 | 1.04 | 5.08 | 3.77 | 2.34 | 3.65 | 1.86 | — | — | — |
| 1945 | — | — | — | 6.28 | 7.58 | 6.25 | 9.08 | 3.49 | 4.15 | 2.83 | 4.40 | 3.76 | — |
| 1946 | 2.15 | 3.03 | 1.13 | 2.00 | 5.68 | 3.07 | 4.73 | 2.10 | 4.69 | 2.44 | 1.23 | 2.81 | 35.06 |
| 1947 | 3.56 | 2.77 | 4.57 | 4.92 | 4.08 | 4.27 | 4.96 | 2.92 | 2.31 | 2.56 | 5.13 | 2.70 | 44.75 |
| 1948 | 2.31 | 2.15 | 4.23 | 2.72 | 6.24 | 7.12 | 4.23 | 3.39 | 3.28 | 1.94 | 4.95 | 10.76 | 53.32 |
| 1949 | 4.32 | 3.79 | 1.39 | 3.30 | 3.94 | 2.61 | 3.77 | 3.52 | 3.31 | 2.43 | 1.64 | 3.81 | 37.83 |
| 1950 | 4.36 | 3.03 | 2.35 | 2.79 | 3.86 | 3.54 | 3.45 | 2.85 | 0.91 | 2.00 | 9.77 | 4.09 | 43.00 |
| Av. 36 yrs. | 3.11 | 2.78 | 3.47 | 3.45 | 3.86 | 4.37 | 4.50 | 4.34 | 3.91 | 3.31 | 3.79 | 3.15 | 44.04 |

PALMER, MASS. (Three Rivers)*
Record: April, 1921, to December, 1950

| Year | Jan. | Feb. | Mar. | Apr. | May | June | July | Aug. | Sept. | Oct. | Nov. | Dec. | Annual |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1942 | 3.65 | 1.58 | 6.29 | 1.12 | 3.79 | 3.79 | 5.90 | 2.66 | 4.02 | 3.61 | 5.75 | 5.51 | 47.67 |
| 1943 | 2.96 | 1.66 | 3.52 | 3.02 | 7.17 | 3.92 | 4.90 | 2.20 | 0.91 | 4.19 | 5.78 | 0.84 | 41.07 |
| 1944 | 1.19 | 2.13 | 3.92 | 3.54 | 1.03 | 6.25 | 1.25 | 2.55 | 7.16 | 2.34 | 3.85 | 2.96 | 38.17 |
| 1945 | — | — | — | — | — | — | — | — | — | — | — | — | — |
| 1946 | — | — | — | — | — | — | — | — | 2.66 | 0.82 | 1.43 | 2.55 | — |
| 1947 | 2.93 | 2.29 | 2.50 | 5.46 | 2.75 | 3.23 | 6.43 | 2.00 | 3.43 | 2.25 | 5.50 | 2.14 | 40.91 |
| 1948 | 2.66 | 2.07 | 3.65 | 3.59 | 5.16 | 6.83 | 5.60 | 3.20 | 1.07 | 1.03 | 5.81 | 2.68 | 43.35 |
| 1949 | 3.53 | 2.57 | 1.22 | 2.50 | 4.67 | 0.65 | 3.37 | 5.32 | 1.84 | 2.35 | 2.30 | 3.62 | 33.94 |
| 1950 | 4.57 | 3.51 | 2.40 | 3.68 | 3.44 | 4.73 | 3.37 | 5.31 | 1.30 | 1.64 | 4.55 | 3.85 | 42.35 |
| Av. 27 yrs. | 3.18 | 2.57 | 3.42 | 3.36 | 3.38 | 3.92 | 3.74 | 3.61 | 3.52 | 2.66 | 3.55 | 3.08 | 39.99 |

*Formerly Bondsville.

PEABODY, MASS. (Water Works Pumping Station)—Elevation, 75 feet
Record: January, 1903, to December, 1916 — June, 1933, to December, 1950

| Year | Jan. | Feb. | Mar. | Apr. | May | June | July | Aug. | Sept. | Oct. | Nov. | Dec. | Annual |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1942 | 3.84 | 4.26 | 6.64 | 1.54 | 1.77 | 2.53 | 3.01 | 3.83 | 2.18 | 3.56 | 5.04 | 4.47 | 42.67 |
| 1943 | 2.58 | 1.19 | 4.02 | 2.68 | 4.72 | 1.51 | 3.79 | 1.51 | 1.78 | 4.78 | 3.31 | 1.16 | 33.03 |
| 1944 | 2.66 | 2.21 | 4.11 | 4.01 | 0.47 | 4.31 | 1.87 | 2.65 | 6.48 | 2.29 | 6.81 | 3.49 | 41.36 |
| 1945 | 3.34 | 3.87 | 1.65 | 2.57 | 3.49 | 6.28 | 3.15 | 3.14 | 1.11 | 2.69 | 7.69 | 7.21 | 46.19 |
| 1946 | 4.54 | 3.55 | 1.58 | 2.96 | 5.61 | 2.48 | 1.23 | 9.75 | 2.14 | 0.64 | 1.23 | 4.57 | 40.28 |
| 1947 | 2.86 | 1.20 | 2.85 | 4.43 | 3.89 | 2.26 | 3.57 | 1.96 | 2.91 | 0.71 | 6.14 | 3.52 | 36.30 |
| 1948 | 6.49 | 2.36 | 2.67 | 2.65 | 5.02 | 4.43 | 3.49 | 1.40 | 1.35 | 4.50 | 5.85 | 1.45 | 41.66 |
| 1949 | 3.86 | 2.41 | 1.81 | 3.67 | 3.40 | 0.77 | 1.77 | 1.42 | 5.05 | 1.67 | 3.37 | 2.08 | 31.28 |
| 1950 | 3.87 | 3.51 | 2.96 | 1.77 | 1.62 | 1.11 | 1.25 | 3.27 | 2.08 | 2.64 | 7.08 | 3.86 | 35.02 |
| Av. 30 yrs. | 3.92 | 3.14 | 3.48 | 3.83 | 3.07 | 3.51 | 3.22 | 3.14 | 3.28 | 2.70 | 3.92 | 3.67 | 40.88 |

PELHAM, MASS. (West Pelham)—Elevation, 600 feet
Record: November, 1936, to December, 1950

| Year | Jan. | Feb. | Mar. | Apr. | May | June | July | Aug. | Sept. | Oct. | Nov. | Dec. | Annual |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1942 | 3.53 | 1.58 | 7.07 | 1.05 | 3.31 | 4.87 | 5.22 | 1.76 | 4.21 | 4.22 | 5.39 | 5.43 | 47.64 |
| 1943 | 3.35 | 1.51 | 3.55 | 3.46 | 7.21 | 2.03 | 6.77 | 3.63 | 2.18 | 4.36 | 6.50 | 0.60 | 45.15 |
| 1944 | 1.59 | 2.21 | 4.65 | 4.41 | 2.11 | 6.25 | 3.53 | 3.17 | 6.60 | 1.97 | 4.25 | 2.95 | 43.69 |
| 1945 | 3.13 | 3.88 | 1.90 | 5.99 | 7.80 | 10.46 | 6.61 | 2.89 | 2.58 | 2.50 | 3.91 | 4.56 | 56.21 |
| 1946 | 2.61 | 3.78 | 1.88 | 2.33 | 5.72 | 4.26 | 5.12 | 3.23 | 4.84 | 1.82 | 0.80 | 3.33 | 39.72 |
| 1947 | 3.65 | 2.14 | 2.84 | 4.66 | 3.84 | 2.87 | 3.64 | 1.06 | 4.34 | 2.05 | 5.60 | 2.40 | 39.09 |
| 1948 | 2.96 | 2.47 | 3.73 | 2.86 | 5.29 | 6.53 | 4.62 | 2.58 | 2.73 | 1.08 | 6.65 | 2.88 | 44.38 |
| 1949 | 4.78 | 3.31 | 1.66 | 3.39 | 5.21 | 0.84 | 4.10 | 3.83 | 4.40 | 3.10 | 2.10 | 3.57 | 40.29 |
| 1950 | 4.61 | 3.74 | 3.02 | 4.55 | 3.66 | 5.76 | 4.49 | 3.12 | 2.32 | 2.54 | 6.39 | 4.42 | 48.62 |
| Av. 14 yrs. | 3.41 | 2.67 | 3.41 | 3.82 | 4.63 | 5.18 | 4.98 | 3.36 | 4.21 | 2.94 | 4.40 | 3.37 | 46.38 |

PELHAM, MASS. (M.D.W.S. Commission)—Elevation, 1,130 feet
Record: July, 1939, to December, 1950

| Year | Jan. | Feb. | Mar. | Apr. | May | June | July | Aug. | Sept. | Oct. | Nov. | Dec. | Annual |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1942 | 2.99 | 1.19 | 6.14 | 0.68 | 3.30 | 6.06 | 5.62 | 2.17 | 4.54 | 4.34 | 5.92 | 5.13 | 48.08 |
| 1943 | 2.63 | 1.70 | 2.48 | 3.29 | 6.48 | 1.84 | 6.54 | 3.60 | 1.77 | 4.97 | 6.29 | 0.63 | 42.22 |
| 1944 | 1.26 | 1.88 | 4.04 | 4.50 | 1.84 | 7.72 | 4.01 | 2.51 | 7.44 | 2.40 | 4.51 | 2.81 | 44.92 |
| 1945 | 2.49 | 3.87 | 1.80 | 6.55 | 7.43 | 10.12 | 7.70 | 3.31 | 3.00 | 3.11 | 4.28 | 4.08 | 57.74 |
| 1946 | 2.32 | 3.60 | 1.74 | 2.51 | 6.87 | 4.89 | 4.42 | 5.06 | 5.21 | 1.56 | 1.12 | 3.05 | 42.35 |
| 1947 | 3.35 | 2.19 | 2.59 | 4.55 | 3.91 | 3.33 | 3.03 | 1.03 | 4.10 | 2.12 | 5.80 | 2.06 | 38.06 |
| 1948 | 2.42 | 1.95 | 3.51 | 3.32 | 6.44 | 7.05 | 4.33 | 3.12 | 3.03 | 1.22 | 7.65 | 2.99 | 47.03 |
| 1949 | 4.70 | 3.43 | 1.66 | 3.27 | 5.95 | 0.85 | 4.03 | 3.14 | 4.29 | 3.20 | 2.07 | 3.91 | 40.50 |
| 1950 | 4.42 | 3.92 | 2.63 | 4.26 | 3.58 | 5.33 | 4.10 | 3.33 | 2.46 | 2.52 | 6.25 | 4.46 | 47.26 |
| Av. 11 yrs. | 2.80 | 2.55 | 2.96 | 3.63 | 5.16 | 5.09 | 4.83 | 3.02 | 3.63 | 2.70 | 5.01 | 3.21 | 44.59 |

PEMBROKE, MASS. (Brockton Water Works Pumping Station)—Elevation, 65 feet
Record: January, 1916, to December, 1950

| Year | Jan. | Feb. | Mar. | Apr. | May | June | July | Aug. | Sept. | Oct. | Nov. | Dec. | Annual |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1942 | 3.39 | 2.15 | 7.29 | 1.10 | 1.53 | 3.86 | 3.58 | 3.79 | 2.56 | 3.58 | 4.86 | 3.41 | 41.10 |
| 1943 | 2.68 | 1.43 | 2.56 | 3.26 | 5.14 | 2.66 | 3.41 | 4.17 | 1.70 | 3.32 | 3.11 | 1.14 | 34.58 |
| 1944 | 2.23 | 1.62 | 3.65 | 3.34 | 0.81 | 3.94 | 0.41 | 0.73 | 7.16 | 2.10 | 7.49 | 3.38 | 36.36 |
| 1945 | 3.64 | 3.39 | 2.14 | 2.02 | 4.75 | 4.31 | 2.87 | 2.47 | 1.59 | 3.32 | 9.67 | 7.48 | 47.65 |
| 1946 | 3.32 | 2.86 | 1.60 | 2.59 | 4.22 | 3.99 | 1.80 | 10.16 | 2.42 | 0.30 | 1.13 | 3.06 | 36.95 |
| 1947 | 2.23 | 1.29 | 2.26 | 5.32 | 4.31 | 4.08 | 2.90 | 1.50 | 2.64 | 3.07 | 4.11 | 3.79 | 37.50 |
| 1948 | 6.13 | 1.72 | 3.27 | 2.85 | 8.27 | 3.45 | 6.23 | 2.92 | 1.24 | 7.41 | 4.36 | 1.75 | 49.60 |
| 1949 | 3.42 | 3.83 | 2.07 | 3.26 | 3.31 | 0.16 | 1.34 | 1.49 | 3.00 | 1.38 | 3.16 | 2.25 | 28.67 |
| 1950 | 3.25 | 2.90 | 2.78 | 3.14 | 2.32 | 2.09 | 0.99 | 4.43 | 2.85 | 1.40 | 7.14 | 3.61 | 36.90 |
| Av. 35 yrs. | 3.47 | 2.78 | 3.59 | 3.90 | 3.16 | 3.72 | 3.52 | 3.93 | 3.48 | 3.09 | 3.81 | 3.45 | 41.90 |

PEPPERELL, MASS. (East Pepperell)—Elevation, 225 feet
Record: August, 1935, to December, 1950

| Year | Jan. | Feb. | Mar. | Apr. | May | June | July | Aug. | Sept. | Oct. | Nov. | Dec. | Annual |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1942 | 3.88 | 3.05 | 7.65 | 1.35 | 3.55 | 4.00 | 6.35 | 2.49 | 3.04 | 3.27 | 5.12 | 5.97 | 49.72 |
| 1943 | 3.84 | 1.32 | 3.81 | 3.99 | 5.95 | 2.55 | 5.30 | 2.02 | 0.75 | 5.39 | 5.28 | 0.73 | 40.93 |
| 1944 | 2.40 | 2.50 | 4.45 | 4.12 | 0.80 | 9.03 | 2.19 | 0.49 | 7.21 | 2.17 | 4.87 | 4.54 | 44.77 |
| 1945 | 3.95 | 4.52 | 1.82 | 4.31 | 5.55 | 6.00 | 4.66 | 3.12 | 1.09 | 2.36 | 5.87 | 5.64 | 48.89 |
| 1946 | 3.93 | 3.40 | 1.55 | 3.34 | 7.26 | 3.01 | 3.16 | 7.60 | 4.08 | 0.96 | 0.78 | 4.25 | 43.32 |
| 1947 | 3.31 | 2.47 | 3.65 | 4.29 | 2.94 | 4.16 | 3.75 | 1.40 | 2.94 | 1.20 | 5.74 | 3.60 | 39.45 |
| 1948 | 3.60 | 2.46 | 2.96 | 3.07 | 6.25 | 5.57 | 4.67 | 1.59 | 0.52 | 2.10 | 6.56 | 1.77 | 41.12 |
| 1949 | 4.28 | 3.49 | 1.37 | 4.87 | 4.05 | 0.77 | 2.10 | 3.37 | 2.62 | 2.59 | 2.20 | 2.12 | 33.83 |
| 1950 | 4.83 | 3.43 | 3.54 | 2.72 | 1.54 | 1.75 | 1.99 | 3.88 | 2.06 | 3.79 | 6.03 | 4.09 | 39.65 |
| Av. 15 yrs. | 3.98 | 3.03 | 3.71 | 3.69 | 4.02 | 3.94 | 4.19 | 2.92 | 3.02 | 2.70 | 4.28 | 3.72 | 43.20 |

PERU, MASS.—Elevation, 1,700 feet
Record: January, 1913, to December, 1950

| Year | Jan. | Feb. | Mar. | Apr. | May | June | July | Aug. | Sept. | Oct. | Nov. | Dec. | Annual |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1942 | 3.42 | 2.18 | 8.12 | 2.09 | 5.26 | 3.35 | 6.87 | 3.36 | 5.40 | 4.58 | 5.23 | 4.33 | 54.19 |
| 1943 | 2.21 | 1.65 | 2.52 | 3.57 | 7.31 | 4.50 | 5.76 | 4.21 | 1.01 | 4.74 | 4.69 | 0.72 | 42.89 |
| 1944 | 1.48 | 2.19 | 5.05 | 3.86 | 2.21 | 5.15 | 4.68 | 2.34 | 5.81 | 2.66 | 5.33 | 3.62 | 44.38 |
| 1945 | 4.32 | 4.42 | 2.03 | 6.24 | 7.60 | 10.55 | 10.88 | 3.35 | 3.63 | 3.38 | 5.35 | 3.51 | 65.26 |
| 1946 | 2.79 | 3.43 | 1.25 | 2.69 | 7.46 | 3.90 | 5.62 | 2.74 | 5.91 | 2.47 | 1.58 | 3.33 | 43.17 |
| 1947 | 3.87 | 3.19 | 6.08 | 3.91 | 4.60 | 4.13 | 4.08 | 1.70 | 4.00 | 2.95 | 4.97 | 3.34 | 46.82 |
| 1948 | 3.18 | 3.28 | 4.60 | 3.00 | 7.77 | 9.06 | 2.13 | 2.53 | 0.93 | 2.47 | 4.91 | 12.48 | 56.34 |
| 1949 | 5.84 | 4.14 | 2.29 | 4.61 | 4.35 | 2.25 | 4.25 | 3.68 | 4.47 | 3.03 | 2.03 | 3.22 | 44.16 |
| 1950 | 4.69 | 4.28 | 3.21 | 3.29 | 4.88 | 4.12 | 4.46 | 4.07 | 1.47 | 2.36 | 8.35 | 3.91 | 49.09 |
| Av. 38 yrs. | 3.40 | 3.31 | 4.00 | 3.70 | 4.06 | 4.33 | 4.76 | 3.90 | 4.22 | 3.26 | 4.16 | 3.45 | 46.55 |

PETERSHAM, MASS. (Harvard Forest) (Hydrologic Network)
Record: January, 1940, to December, 1948

| Year | Jan. | Feb. | Mar. | Apr. | May | June | July | Aug. | Sept. | Oct. | Nov. | Dec. | Annual |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1940 | 1.90 | 2.73 | 4.48 | 6.07 | 5.33 | 2.35 | 3.82 | 1.73 | 2.45 | 1.08 | 6.42 | 2.61 | 40.97 |
| 1941 | 1.64 | 1.68 | 1.13 | 0.67 | 2.05 | 3.29 | 3.90 | 2.04 | 1.42 | 2.17 | 3.09 | 2.76 | 25.84 |
| 1942 | 2.94 | 1.53 | 6.48 | 0.78 | 2.78 | 4.31 | 4.53 | 1.26 | 2.86 | 2.67 | 5.63 | 4.47 | 40.24 |
| 1943 | 1.67 | 1.38 | 2.32 | 3.49 | 4.97 | 1.94 | 4.51 | 2.66 | 1.72 | 5.08 | 5.78 | 0.72 | 36.24 |
| 1944 | 1.09 | 1.91 | 4.29 | 3.74 | 0.91 | 9.51 | 4.32 | 0.66 | 6.40 | 1.42 | 3.43 | 2.47 | 40.15 |
| 1945 | 2.71 | 3.91 | 1.66 | 4.87 | 5.30 | 7.92 | 6.02 | 3.27 | 3.27 | 2.72 | 3.89 | 4.06 | 49.60 |
| 1946 | 3.00 | 3.64 | 1.79 | 2.40 | 5.94 | 7.86 | 3.87 | 5.00 | 4.17 | 1.18 | 1.19 | 3.42 | 43.46 |
| 1947 | 3.14 | 2.21 | 2.73 | 4.19 | 4.06 | 3.51 | 4.37 | 3.02 | 4.08 | 1.45 | 5.12 | 2.87 | 40.75 |
| 1948 | 3.01 | 2.23 | 3.33 | 3.44 | 6.20 | 5.48 | 3.17 | 1.97 | 1.41 | 1.34 | 6.04 | 2.76 | 40.38 |
| Av. 9 yrs. | 2.34 | 2.36 | 3.13 | 3.29 | 4.17 | 5.13 | 4.28 | 2.40 | 3.09 | 2.12 | 4.51 | 2.90 | 39.72 |

PETERSHAM, MASS. (Harvard Forest)—Elevation, 1,100 feet
Record: January, 1916, to December, 1950

| Year | Jan. | Feb. | Mar. | Apr. | May | June | July | Aug. | Sept. | Oct. | Nov. | Dec. | Annual |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1942 | 3.32 | 2.19 | 5.94 | 0.78 | 2.09 | 4.37 | 5.00 | 1.58 | 3.02 | 2.73 | 5.76 | 4.42 | 41.20 |
| 1943 | 1.91 | 1.34 | 2.44 | 3.72 | 5.21 | 1.92 | 4.52 | 2.99 | 1.70 | 5.05 | 5.75 | 0.73 | 37.28 |
| 1944 | 1.13 | 1.83 | 4.34 | 3.59 | 0.91 | 9.48 | 4.28 | 0.63 | 6.40 | 1.49 | 3.54 | 2.61 | 40.23 |
| 1945 | 2.44 | 3.95 | 1.70 | 4.90 | 5.29 | 7.72 | 6.03 | 3.20 | 3.09 | 2.59 | 3.68 | 4.13 | 48.72 |
| 1946 | 2.97 | 3.57 | 1.70 | 2.39 | 5.65 | 7.81 | 3.96 | 5.00 | 4.08 | 1.10 | 1.06 | 3.37 | 42.66 |
| 1947 | 2.67 | 2.17 | 2.67 | 3.73 | 4.40 | 3.56 | 4.47 | 2.98 | 4.23 | 1.76 | 5.03 | 2.82 | 40.49 |
| 1948 | 2.81 | 2.32 | 3.28 | 3.41 | 6.01 | 6.65 | 3.12 | 2.10 | 1.50 | 1.30 | 6.10 | 2.80 | 41.40 |
| 1949 | 4.70 | 3.25 | 1.90 | 3.55 | 4.60 | 0.80 | 2.40 | 2.47 | 3.59 | 2.35 | 2.10 | 3.55 | 35.26 |
| 1950 | 4.65 | 3.60 | 2.70 | 3.15 | 2.50 | 5.01 | 1.90 | 3.50 | 1.41 | 1.83 | 8.92 | 3.83 | 43.00 |
| Av. 35 yrs. | 3.50 | 3.14 | 3.44 | 3.57 | 3.44 | 4.46 | 3.86 | 3.52 | 4.17 | 2.86 | 4.04 | 3.27 | 43.27 |

PETERSHAM, MASS. (Nichewaug) (M.D.W.S. Commission)
Record: July, 1939, to December, 1950

| Year | Jan. | Feb. | Mar. | Apr. | May | June | July | Aug. | Sept. | Oct. | Nov. | Dec. | Annual |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1942 | 4.19 | 1.94 | 6.30 | 0.94 | 3.35 | 5.79 | 4.81 | 1.92 | 3.59 | 3.84 | 5.56 | 3.74 | 45.97 |
| 1943 | 3.22 | 1.35* | 2.44* | 3.62 | 5.53 | 1.68 | 4.70 | 5.82 | 1.51 | 5.48 | 6.36 | 0.74 | 42.45 |
| 1944 | 1.34 | 1.57 | 4.32 | 4.61 | 1.43 | 8.08 | 3.62 | 1.97 | 7.01 | 1.96 | 3.79 | 2.33 | 42.03 |
| 1945 | 2.89 | 2.92 | 1.50 | 5.31 | 6.70 | 9.17 | 8.01 | 3.09 | 1.60 | 2.85 | 3.96 | 4.55 | 52.55 |
| 1946 | 2.80 | 2.97 | 1.96 | 2.47 | 6.18 | 7.29 | 3.52 | 4.02 | 3.94 | 0.99 | 1.43 | 2.88 | 40.45 |
| 1947 | 2.94 | 2.46 | 2.09 | 4.19 | 3.07 | 2.52 | 5.95 | 1.20 | 2.77 | 1.41 | 5.68 | 2.88 | 37.16 |
| 1948 | 3.25 | 2.06 | 3.86 | 3.18 | 6.15 | 5.45 | 5.29 | 2.33 | 2.64 | 1.38 | 6.57 | 2.00 | 44.16 |
| 1949 | 5.66 | 3.25 | 1.36 | 2.78 | 4.72 | 0.69 | 2.11 | 4.31 | 2.62 | 2.43 | 3.07 | 3.61 | 36.61 |
| 1950 | 5.19 | 3.41 | 2.39 | 3.73 | 3.21 | 4.24 | 3.01 | 3.07 | 1.57 | 1.94 | 6.54 | 4.24 | 42.54 |
| Av. 11 yrs. | 3.28 | 2.38 | 2.99 | 3.51 | 4.57 | 4.62 | 4.53 | 2.92 | 2.78 | 2.34 | 4.83 | 3.02 | 41.77 |

*Interpolated.

PHILLIPSTON, MASS. (Athol Water Works)—Elevation, 1,190 feet
Record: January, 1914, to December, 1950 (except January-September, 1920)

| Year | Jan. | Feb. | Mar. | Apr. | May | June | July | Aug. | Sept. | Oct. | Nov. | Dec. | Annual |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1942 | 3.24 | 1.92 | 7.22 | 1.19 | 2.78 | 4.92 | 6.35 | 1.55 | 3.26 | 3.77 | 4.66 | 4.90 | 45.76 |
| 1943 | 2.47 | 1.41 | 2.48 | 3.43 | 5.87 | 2.14 | 5.86 | 2.62 | 1.49 | 5.17 | 6.85 | 0.53 | 39.82 |
| 1944 | 1.41 | 1.85 | 4.05 | 3.51 | 1.34 | 8.85 | 4.32 | 0.59 | 5.40 | 1.73 | 3.17 | 2.51 | 38.73 |
| 1945 | 2.94 | 3.64 | 1.56 | 5.68 | 5.50 | 7.52 | 5.66 | 2.44 | 3.90 | 2.92 | 3.58 | 3.73 | 49.07 |
| 1946 | 2.45 | 2.88 | 2.00 | 2.58 | 6.89 | 4.23 | 4.97 | 5.43 | 4.40 | 1.19 | 0.98 | 2.62 | 40.62 |
| 1947 | 2.99 | 2.38 | 2.64 | 3.94 | 4.16 | 3.80 | 5.76 | 3.33 | 3.88 | 1.49 | 4.70 | 2.38 | 41.45 |
| 1948 | 2.36 | 2.05 | 3.18 | 3.71 | 6.58 | 5.52 | 2.51 | 2.18 | 1.94 | 1.62 | 6.68 | 2.84 | 41.17 |
| 1949 | 4.61 | 2.92 | 1.60 | 3.99 | 4.43 | 1.02 | 3.10 | 2.56 | 3.53 | 2.50 | 1.94 | 3.20 | 35.40 |
| 1950 | 4.53 | 2.62 | 2.14 | 2.94 | 2.52 | 5.33 | 2.70 | 4.44 | 1.23 | 1.81 | 7.12 | 3.97 | 41.35 |
| Av. 36 yrs. | 2.81 | 2.33 | 3.11 | 3.40 | 3.45 | 4.42 | 4.28 | 3.42 | 3.79 | 2.81 | 3.81 | 2.89 | 40.52 |

PITTSFIELD, MASS. (Airport)
Record: May, 1943, to December, 1950

| Year | Jan. | Feb. | Mar. | Apr. | May | June | July | Aug. | Sept. | Oct. | Nov. | Dec. | Annual |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1943 | — | — | — | — | 6.37 | 3.65 | 6.69 | 5.72 | 1.42 | 3.90 | 6.21 | 0.72 | — |
| 1944 | 1.58 | 2.64 | 4.00 | 4.26 | 2.65 | 5.86 | 7.34 | 3.11 | 5.43 | 2.39 | 4.17 | 2.98 | 46.41 |
| 1945 | 2.79 | 2.62 | 1.93 | 6.66 | 5.70 | 6.42 | 8.34 | 3.97 | 3.38 | 3.05 | 4.81 | 2.35 | 52.52 |
| 1946 | 1.86 | 3.05 | 1.27 | 2.75 | 6.88 | 4.19 | 5.47 | 3.85 | 6.00 | 2.61 | 1.35 | 3.02 | 42.30 |
| 1947 | 4.45 | 2.97 | 3.48 | 5.24 | 4.00 | 3.65 | 5.97 | 2.74 | 3.61 | 2.89 | 4.60 | 2.45 | 46.05 |
| 1948 | 2.44 | 2.20 | 3.74 | 4.65 | 7.23 | 10.32 | 2.03 | 2.81 | 0.95 | 1.98 | 5.00 | 9.34 | 52.69 |
| 1949 | 4.04 | 3.18 | 2.38 | 3.78 | 3.87 | 4.21 | 6.63 | 3.74 | 3.79 | 2.47 | 2.07 | 3.14 | 43.30 |
| 1950 | 3.91 | 3.76 | 2.70 | 2.79 | 2.91 | 4.19 | 5.05 | 3.45 | 2.81 | 1.55 | 6.36 | 2.89 | 42.37 |
| Av. 7 yrs. | 3.01 | 2.92 | 2.78 | 4.30 | 4.75 | 5.55 | 5.83 | 3.38 | 3.71 | 2.42 | 4.05 | 3.81 | 46.51 |

PITTSFIELD, MASS. (City Hall)—Elevation, 1,050 feet
Record: March, 1894, to December, 1948

| Year | Jan. | Feb. | Mar. | Apr. | May | June | July | Aug. | Sept. | Oct. | Nov. | Dec. | Annual |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1942 | 1.77 | 2.02 | 5.85 | 1.57 | 3.90 | 2.41 | 6.03 | 1.49 | 5.32 | 3.08 | 5.81 | 5.24 | 44.49 |
| 1943 | 2.48 | 1.32 | 3.25 | 3.76 | 6.62 | 3.13 | 5.11 | 4.71 | 1.25 | 3.27 | 5.14 | 0.49 | 40.53 |
| 1944 | 2.15 | 2.36 | 4.47 | 3.45 | 2.38 | 4.57 | 6.19 | 3.33 | 4.96 | 1.75 | 3.91 | 3.30 | 42.82 |
| 1945 | 3.49 | 2.41 | 1.42 | 5.56 | 4.91 | 5.88 | 8.55 | 2.33 | 2.73 | 2.50 | 4.47 | 2.00 | 46.25 |
| 1946 | 2.59 | 2.91 | 1.14 | 2.35 | 6.00 | 3.86 | 4.94 | 3.39 | 5.35 | 2.34 | 1.05 | 2.80 | 38.72 |
| 1947 | 4.02 | 2.55 | 3.57 | 4.78 | 4.10 | 3.31 | 4.02 | 3.93 | 3.67 | 2.03 | 4.27 | 2.25 | 42.50 |
| 1948 | 2.23 | 2.53 | 3.44 | 3.92 | 6.56 | 6.18 | 1.53 | 2.85 | 0.91 | 1.31 | 4.57 | 8.88 | 44.91 |
| Av. 53 yrs. | 3.02 | 2.71 | 3.48 | 3.20 | 3.35 | 3.97 | 4.46 | 4.16 | 3.93 | 3.03 | 3.41 | 3.22 | 41.94 |

PLAINFIELD, MASS.—Elevation, 1,650 feet
Record: October, 1919, to December, 1950

| Year | Jan. | Feb. | Mar. | Apr. | May | June | July | Aug. | Sept. | Oct. | Nov. | Dec. | Annual |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1942 | 2.98 | 2.12 | 7.30 | 1.42 | 4.94 | 2.72 | 6.73 | 4.08 | 6.12 | 5.88 | 4.59 | 6.15 | 55.03 |
| 1943 | 2.59 | 1.73 | 3.07 | 4.46 | 9.33 | 3.87 | 6.17 | 2.36 | 1.23 | 6.01 | 6.40 | 0.71 | 47.93 |
| 1944 | 1.75 | 2.22 | 4.80 | 4.49 | 1.99 | 6.89 | 5.26 | 1.43 | 6.78 | 2.39 | 4.20 | 4.12 | 46.32 |
| 1945 | 3.84 | 4.14 | 1.76 | 7.47 | 8.68 | 6.47 | 8.26 | 3.27 | 3.26 | 3.50 | 3.87 | 3.48 | 58.00 |
| 1946 | 2.65 | 3.85 | 1.46 | 3.07 | 7.55 | 6.19 | 3.92 | 3.18 | 6.93 | 1.97 | 1.15 | 3.22 | 45.14 |
| 1947 | 4.47 | 2.62 | 4.44 | 4.47 | 3.80 | 3.63 | 6.85 | 2.87 | 2.72 | 1.96 | 4.83 | 2.52 | 45.18 |
| 1948 | 2.34 | 3.08 | 3.42 | 4.04 | 8.91 | 7.52 | 2.58 | 1.89 | 2.01 | 2.37 | 5.42 | 8.69 | 52.27 |
| 1949 | 4.27 | 3.43 | 1.85 | 3.72 | 5.16 | 1.63 | 3.80 | 4.20 | 4.21 | 2.85 | 1.35 | 2.19 | 38.66 |
| 1950 | 5.11 | 4.29 | 3.02 | 3.18 | 4.57 | 3.30 | 3.10 | 4.27 | 1.76 | 2.14 | 7.11 | 3.94 | 45.79 |
| Av. 31 yrs. | 3.30 | 2.84 | 3.75 | 3.78 | 4.61 | 4.68 | 4.69 | 3.70 | 4.46 | 3.51 | 4.33 | 3.27 | 46.92 |

PLYMOUTH, MASS. (U.S. Weather Bureau, 1887-1897)
(Water Works after 1898)—Elevation, 70 feet
Record: January, 1887, to December, 1950

| Year | Jan. | Feb. | Mar. | Apr. | May | June | July | Aug. | Sept. | Oct. | Nov. | Dec. | Annual |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1942 | 4.58 | 3.41 | 8.19 | 1.06 | 1.53 | 3.31 | 3.80 | 5.46 | 3.32 | 4.36 | 5.96 | 4.16 | 49.14 |
| 1943 | 4.68 | 1.78 | 3.93 | 3.20 | 5.06 | 1.99 | 3.17 | 2.01 | 3.55 | 3.94 | 3.17 | 1.32 | 37.80 |
| 1944 | 2.19 | 2.23 | 5.15 | 4.01 | 0.56 | 4.08 | 0.49 | 1.01 | 5.53 | 2.44 | 9.39 | 4.40 | 41.48 |
| 1945 | 5.29 | 4.33 | 2.64 | 1.94 | 4.25 | 4.55 | 2.85 | 3.31 | 1.78 | 4.23 | 10.42 | 9.36 | 55.45 |
| 1946 | 3.84 | 3.51 | 1.48 | 2.81 | 5.07 | 3.63 | 2.16 | 11.50 | 2.50 | 0.59 | 0.89 | 4.14 | 42.12 |
| 1947 | 2.78 | 1.97 | 3.35 | 5.30 | 3.01 | 4.30 | 3.62 | 1.32 | 2.27 | 3.05 | 3.71 | 5.03 | 39.71 |
| 1948 | 7.43 | 2.58 | 4.14 | 3.86 | 8.64 | 3.20 | 2.76 | 1.87 | 1.53 | 6.97 | 4.47 | 2.53 | 49.98 |
| 1949 | 4.09 | 4.47 | 3.00 | 5.50 | 3.57 | 0.03 | 1.26 | 1.38 | 2.51 | 1.08 | 3.56 | 1.96 | 32.41 |
| 1950 | 4.41 | 4.69 | 4.39 | 3.31 | 2.79 | 2.41 | 0.98 | 3.71 | 2.38 | 1.47 | 6.29 | 4.43 | 41.26 |
| Av. 64 yrs. | 4.33 | 3.93 | 4.48 | 4.20 | 3.30 | 3.25 | 3.15 | 3.70 | 3.52 | 3.77 | 4.14 | 4.09 | 45.86 |

PLYMOUTH, MASS. (Weather Bureau)—Elevation, 50 feet
Record: June, 1886, to December, 1898; January, 1905, to December, 1920; January, 1922, to December, 1950

| Year | Jan. | Feb. | Mar. | Apr. | May | June | July | Aug. | Sept. | Oct. | Nov. | Dec. | Annual |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1942 | 3.15 | 3.91 | 7.94 | 1.13 | 1.70 | 2.62 | 3.34 | 4.89 | 3.55 | 4.59 | 5.77 | 3.81 | 46.40 |
| 1943 | 3.39 | 1.45 | 2.50 | 3.52 | 6.19 | 1.91 | 3.55 | 3.02 | 2.23 | 3.96 | 2.91 | 1.14 | 35.77 |
| 1944 | 2.02 | 1.76 | 4.50 | 3.58 | 0.23 | 3.78 | 0.60 | 1.28 | 6.48 | 2.23 | 9.12 | 3.41 | 38.99 |
| 1945 | 5.00 | 3.79 | 2.05 | 1.77 | 4.18 | 4.71 | 2.63 | 3.43 | 1.72 | 4.67 | 8.11 | 9.18 | 51.19 |
| 1946 | 3.49 | 3.18 | 1.29 | 3.18 | 5.47 | 3.76 | 0.99 | 11.75 | 1.81 | 0.88 | 1.02 | 3.81 | 40.63 |
| 1947 | 2.32 | 1.51 | 3.17 | 3.84 | 5.07 | 3.79 | 3.52 | 1.36 | 2.32 | 3.45 | 3.77 | 4.80 | 38.92 |
| 1948 | 6.15 | 2.15 | 3.76 | 3.10 | 8.25 | 3.39 | 3.50 | 2.29 | 0.50 | 7.63 | 4.66 | 2.41 | 47.79 |
| 1949 | 3.65 | 3.17 | 3.07 | 4.47 | 3.57 | 0.02 | 1.71 | 0.85 | 2.48 | — | 3.65 | 2.35 | — |
| 1950 | — | 3.87 | 3.99 | 2.52 | 2.31 | 2.39 | 0.79 | — | 2.36 | 0.69 | 6.67 | 4.19 | — |
| Av. 54 yrs. | 4.09 | 3.70 | 4.30 | 3.99 | 3.33 | 3.40 | 3.22 | 3.82 | 3.54 | 3.82 | 4.02 | 3.90 | 45.13 |

PRINCETON, MASS. (Metropolitan District Comm.)—Elevation, 1,125 feet
Record: November, 1884, to October, 1892; January, 1897, to December, 1950

| Year | Jan. | Feb. | Mar. | Apr. | May | June | July | Aug. | Sept. | Oct. | Nov. | Dec. | Annual |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1942 | 3.74 | 3.08 | 7.74 | 1.38 | 4.07 | 5.72 | 6.37 | 2.08 | 2.57 | 3.32 | 5.21 | 5.43 | 50.71 |
| 1943 | 3.57 | 1.98 | 3.15 | 3.95 | 5.88 | 1.83 | 4.00 | 3.18 | 1.07 | 5.98 | 5.35 | 0.84 | 40.78 |
| 1944 | 1.78 | 2.66 | 4.69 | 4.01 | 1.76 | 7.72 | 1.45 | 0.96 | 7.54 | 2.10 | 4.50 | 3.08 | 42.25 |
| 1945 | 3.71 | 4.37 | 2.56 | 4.21 | 5.48 | 6.16 | 5.24 | 3.60 | 1.76 | 2.40 | 4.99 | 6.46 | 50.94 |
| 1946 | 4.07 | 3.95 | 1.99 | 2.69 | 6.39 | 3.39 | 5.63 | 4.73 | 6.80 | 1.26 | 1.44 | 4.19 | 46.53 |
| 1947 | 3.62 | 2.42 | 4.08 | 4.58 | 4.57 | 3.08 | 4.17 | 1.23 | 3.55 | 1.08 | 6.34 | 3.56 | 42.28 |
| 1948 | 5.18 | 2.77 | 4.44 | 3.03 | 7.60 | 5.95 | 5.67 | 1.45 | 1.00 | 3.14 | 6.95 | 2.83 | 50.01 |
| 1949 | 4.81 | 3.16 | 2.00 | 4.86 | 3.67 | 0.80 | 2.67 | 3.47 | 3.16 | 2.46 | 2.24 | 3.50 | 36.80 |
| 1950 | 4.93 | 4.46 | 4.30 | 3.86 | 2.86 | 2.69 | 3.69 | 4.50 | 1.54 | 3.46 | 6.41 | 4.75 | 47.45 |
| Av. 61 yrs. | 4.02 | 3.48 | 3.93 | 3.70 | 3.57 | 3.70 | 4.21 | 3.95 | 3.79 | 3.36 | 3.91 | 3.70 | 45.32 |

QUINCY, MASS. (Wollaston)—Elevation, 20 feet
Record: January, 1913, to December, 1950

| Year | Jan. | Feb. | Mar. | Apr. | May | June | July | Aug. | Sept. | Oct. | Nov. | Dec. | Annual |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1942 | 3.65 | 3.12 | 7.82 | 1.55 | 2.07 | 3.23 | 5.88 | 2.24 | 2.43 | 2.58 | 5.55 | 4.50 | 44.62 |
| 1943 | 4.32 | 1.59 | 3.58 | 2.88 | 5.31 | 1.32 | 2.80 | 0.88 | 2.05 | 4.98 | 2.97 | 0.97 | 33.65 |
| 1944 | 1.98 | 2.48 | 4.21 | 3.70 | 0.29 | 3.97 | 1.66 | 0.89 | 6.55 | 3.01 | 6.69 | 3.43 | 38.86 |
| 1945 | 4.32 | 4.50 | 2.09 | 2.29 | 4.93 | 6.98 | 2.41 | 3.59 | 1.42 | 2.61 | 9.45 | 7.77 | 52.36 |
| 1946 | 4.17 | 3.36 | 1.45 | 2.88 | 4.69 | 3.81 | 1.93 | 9.95 | 2.37 | 0.28 | 0.99 | 3.88 | 39.76 |
| 1947 | 2.39 | 1.41 | 2.66 | 4.63 | 4.71 | 4.18 | 3.88 | 2.22 | 4.17 | 1.87 | 5.66 | 4.78 | 42.56 |
| 1948 | 6.32 | 2.19 | 3.41 | 2.28 | 5.50 | 4.50 | 6.23 | 1.93 | 1.13 | 5.46 | 5.49 | 1.54 | 45.98 |
| 1949 | 3.49 | 3.71 | 1.36 | 3.86 | 2.98 | 0.66 | 1.33 | 2.92 | 3.94 | 1.83 | 3.79 | 1.88 | 31.75 |
| 1950 | 3.86 | 3.88 | 3.00 | 3.04 | 1.65 | 1.70 | 2.60 | 4.57 | 1.13 | 2.12 | 7.78 | 3.23 | 38.56 |
| Av. 38 yrs. | 3.76 | 3.32 | 3.61 | 3.76 | 3.13 | 3.61 | 3.48 | 3.81 | 3.34 | 3.01 | 3.78 | 3.55 | 42.16 |

READING, MASS. (Water Works Pumping Station)—Elevation, 80 feet
Record: January, 1899, to December, 1950

| Year | Jan. | Feb. | Mar. | Apr. | May | June | July | Aug. | Sept. | Oct. | Nov. | Dec. | Annual |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1942 | 4.25 | 2.98 | 7.20 | 2.02 | 3.34 | 3.19 | 5.08 | 1.82 | 2.18 | 2.99 | 4.72 | 5.61 | 45.38 |
| 1943 | 3.09 | 1.03 | 3.57 | 2.60 | 5.54 | 2.09 | 4.79 | 1.35 | 0.67 | 5.84 | 4.45 | 1.02 | 36.04 |
| 1944 | 2.63 | 2.26 | 4.22 | 3.84 | 0.83 | 5.32 | 2.56 | 2.83 | 7.22 | 2.65 | 6.03 | 3.18 | 43.57 |
| 1945 | 2.60 | 4.40 | 1.79 | 2.85 | 4.28 | 5.90 | 3.07 | 3.07 | 1.19 | 2.62 | 7.77 | 6.41 | 45.95 |
| 1946 | 3.91 | 3.06 | 1.57 | 2.74 | 5.26 | 3.39 | 1.90 | 8.64 | 2.37 | 0.37 | 1.02 | 4.09 | 38.32 |
| 1947 | 3.10 | 1.03 | 3.69 | 4.91 | 3.27 | 2.58 | 5.83 | 1.44 | 3.33 | 0.44 | 6.24 | 4.05 | 39.91 |
| 1948 | 4.33 | 2.11 | 2.84 | 2.63 | 5.38 | 4.63 | 4.83 | 1.08 | 1.00 | 3.08 | 5.41 | 1.41 | 38.73 |
| 1949 | 3.47 | 3.28 | 1.25 | 4.25 | 3.37 | 0.84 | 1.78 | 5.05 | 4.28 | 1.93 | 3.03 | 1.86 | 34.39 |
| 1950 | 4.41 | 3.12 | 3.67 | 1.95 | 1.38 | 1.38 | 1.91 | 4.19 | 1.56 | 3.27 | 6.31 | 3.53 | 36.68 |
| Av. 52 yrs. | 3.44 | 3.14 | 3.68 | 3.80 | 3.00 | 3.48 | 3.41 | 3.27 | 3.57 | 2.83 | 3.49 | 3.42 | 40.53 |

ROCHESTER, MASS. (Quittacas Pumping Station, New Bedford Water Works)—Elevation, 60 feet
Record: January, 1895, to December, 1950

| Year | Jan. | Feb. | Mar. | Apr. | May | June | July | Aug. | Sept. | Oct. | Nov. | Dec. | Annual |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1942 | 4.88 | 3.35 | 9.59 | 0.95 | 1.55 | 2.24 | 2.55 | 5.72 | 2.66 | 5.49 | 5.60 | 4.61 | 49.19 |
| 1943 | 4.20 | 2.11 | 3.83 | 3.93 | 3.71 | 1.62 | 3.69 | 1.92 | 1.54 | 4.14 | 2.76 | 1.43 | 34.88 |
| 1944 | 2.43 | 2.19 | 4.93 | 3.90 | 0.55 | 4.06 | 0.53 | 1.20 | 6.07 | 2.26 | 8.99 | 4.22 | 41.33 |
| 1945 | 4.58 | 5.77 | 2.57 | 2.63 | 4.50 | 3.41 | 1.18 | 3.24 | 2.00 | 4.01 | 9.61 | 10.13 | 53.63 |
| 1946 | 4.28 | 3.93 | 1.87 | 2.86 | 5.30 | 3.37 | 2.05 | 15.64 | 2.51 | 0.78 | 1.20 | 4.00 | 47.79 |
| 1947 | 3.24 | 1.05 | 3.33 | 6.01 | 3.81 | 3.90 | 4.67 | 1.34 | 1.93 | 3.69 | 4.40 | 2.31 | 39.68 |
| 1948 | 7.55 | 2.99 | 4.27 | 4.16 | 9.78 | 3.08 | 3.04 | 2.19 | 1.87 | 6.14 | 5.21 | 2.36 | 52.64 |
| 1949 | 4.43 | 5.26 | 2.61 | 5.56 | 3.76 | 0.00 | 2.29 | 2.10 | 2.19 | 1.27 | 3.33 | 2.76 | 35.56 |
| 1950 | 4.36 | 5.12 | 4.43 | 3.59 | 2.73 | 3.00 | 0.79 | 5.06 | 2.01 | 1.16 | 6.54 | 4.32 | 43.11 |
| Av. 56 yrs. | 4.15 | 3.83 | 4.39 | 4.10 | 3.40 | 3.36 | 3.16 | 3.90 | 3.33 | 3.61 | 3.96 | 3.98 | 45.17 |

ROCKPORT, MASS.—Elevation, 18 feet
Record: June, 1902, to December, 1950

| Year | Jan. | Feb. | Mar. | Apr. | May | June | July | Aug. | Sept. | Oct. | Nov. | Dec. | Annual |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1942 | — | — | — | — | — | — | 4.77 | 3.62 | — | 2.34 | 5.90 | 3.90 | — |
| 1943 | 4.11 | 1.29 | 3.06 | 3.05 | 5.39 | 1.66 | 3.42 | 1.42 | 1.77 | 3.34 | 3.02 | 1.17 | 32.70 |
| 1944 | 2.53 | 2.56 | 3.29 | 3.41 | 0.81 | 5.32 | 1.89 | 1.58 | 5.69 | 2.41 | 5.52 | 3.34 | 38.35 |
| 1945 | 4.21 | 3.48 | 1.81 | 2.48 | 3.46 | 3.03 | 3.21 | 1.93 | 2.50 | 2.89 | 7.62 | 9.34 | 45.96 |
| 1946 | — | — | — | — | — | — | — | — | — | — | 1.80 | 4.67 | — |
| 1947 | 2.78 | 1.62 | 2.29 | 4.16 | 4.70 | 3.24 | 5.45 | 1.52 | 2.40 | 0.66 | 5.98 | 4.62 | 39.42 |
| 1948 | 5.07 | 2.51 | 2.90 | 2.96 | 5.96 | 3.66 | 3.83 | 1.64 | 0.30 | 4.59 | 5.13 | 1.66 | 40.21 |
| 1949 | 4.07 | 3.25 | 1.66 | 3.08 | 3.47 | 0.46 | 1.75 | 1.20 | 5.63 | 1.85 | 4.42 | 1.71 | 32.55 |
| 1950 | 4.73 | 3.16 | 2.83 | 1.32 | 1.05 | 1.35 | 1.80 | 3.42 | 1.55 | 1.45 | 6.26 | 3.79 | 32.71 |
| Av. 39 yrs. | 3.62 | 3.12 | 3.37 | 3.76 | 2.96 | 3.22 | 3.46 | 2.84 | 3.43 | 2.98 | 3.76 | 3.61 | 40.13 |

RUTLAND, MASS. (West Rutland)—Elevation, 950 feet
Record: November, 1927, to December, 1950

| Year | Jan. | Feb. | Mar. | Apr. | May | June | July | Aug. | Sept. | Oct. | Nov. | Dec. | Annual |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1942 | 3.45 | 2.39 | 5.15 | 1.01 | 4.98 | 4.19 | 4.39 | 2.45 | 3.24 | 3.47 | 4.78 | 4.54 | 44.04 |
| 1943 | 2.98 | 1.24 | 3.46 | 3.93 | 5.17 | 1.57 | 4.23 | 1.44 | 0.68 | 5.64 | 6.03 | 0.73 | 37.10 |
| 1944 | 1.58 | 2.53 | 4.62 | 4.55 | 1.25 | 8.51 | 1.65 | 0.83 | 7.84 | 1.65 | 4.13 | 3.26 | 42.46 |
| 1945 | 3.75 | 4.26 | 2.11 | 4.49 | 5.40 | 6.52 | 5.77 | 3.42 | 2.00 | 2.95 | 4.11 | 4.48 | 49.26 |
| 1946 | 3.39 | 3.60 | 1.90 | 2.52 | 5.27 | 4.36 | 4.39 | 5.20 | 7.54 | 0.96 | 1.38 | 3.20 | 43.71 |
| 1947 | 3.08 | 2.39 | 2.50 | 4.75 | 2.90 | 3.25 | 5.31 | 0.65 | 3.41 | 0.67 | 6.61 | 3.69 | 39.21 |
| 1948 | 4.45 | 2.78 | 4.03 | 3.71 | 6.38 | 6.61 | 7.62 | 2.84 | 1.78 | 1.93 | 7.00 | 3.10 | 52.23 |
| 1949 | 4.46 | 3.71 | 2.06 | 3.19 | 4.30 | 0.81 | 2.85 | 4.15 | 3.02 | 2.45 | 2.44 | 3.87 | 37.31 |
| 1950 | 4.93 | 3.79 | 3.07 | 3.92 | 4.56 | 3.61 | 3.79 | 3.14 | 1.43 | 1.61 | 7.71 | 3.58 | 45.14 |
| Av. 23 yrs. | 3.60 | 2.95 | 3.60 | 3.48 | 3.96 | 4.34 | 3.97 | 3.58 | 4.34 | 2.77 | 3.77 | 3.28 | 43.64 |

RUTLAND, MASS. (North Rutland)—Elevation, 850 feet
Record: November, 1923, to December, 1950

| Year | Jan. | Feb. | Mar. | Apr. | May | June | July | Aug. | Sept. | Oct. | Nov. | Dec. | Annual |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1942 | 3.69 | 2.40 | 6.01 | 0.92 | 4.18 | 5.27 | 5.45 | 1.67 | 2.98 | 4.23 | 3.58 | 3.33 | 43.71 |
| 1943 | 3.29 | 1.81 | 2.54 | 2.55 | 4.49 | 1.88 | 4.81 | 2.68 | 1.12 | 5.00 | 5.08 | 0.32 | 35.57 |
| 1944 | 1.11 | 2.74 | 3.78 | 3.20 | 1.26 | 8.31 | 1.95 | 1.44 | 7.56 | 1.82 | 3.53 | 2.82 | 39.52 |
| 1945 | 2.07 | 4.48 | 1.89 | 4.82 | 5.26 | 6.75 | 4.27 | 3.78 | 1.64 | 1.48 | 4.97 | 4.05 | 45.46 |
| 1946 | 2.42 | 2.76 | 1.10 | 2.38 | 5.14 | 3.32 | 4.05 | 4.78 | 7.17 | 0.81 | 1.46 | 2.88 | 38.27 |
| 1947 | 2.52 | 2.31 | 3.47 | 4.33 | 2.85 | 2.73 | 3.43 | 1.19 | 3.77 | 0.89 | 6.04 | 3.10 | 36.63 |
| 1948 | 3.04 | 2.55 | 3.04 | 3.16 | 8.39 | 6.10 | 4.73 | 2.75 | 1.25 | 1.95 | 6.90 | 2.79 | 46.65 |
| 1949 | 3.98 | 2.33 | 1.43 | 4.17 | 4.19 | 0.61 | 2.81 | 4.58 | 1.85 | 2.56 | 1.22 | 2.55 | 32.28 |
| 1950 | 3.56 | 1.91 | 2.97 | 3.76 | 2.90 | 2.56 | 2.96 | 3.36 | 1.17 | 2.09 | 6.33 | 3.58 | 37.15 |
| Av. 27 yrs. | 3.20 | 2.96 | 3.44 | 3.58 | 3.65 | 4.04 | 4.05 | 3.53 | 4.38 | 2.88 | 3.91 | 3.04 | 42.66 |

RUTLAND, MASS. (Muschopauge Pond)
Record: April, 1931, to December, 1950

| Year | Jan. | Feb. | Mar. | Apr. | May | June | July | Aug. | Sept. | Oct. | Nov. | Dec. | Annual |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1942 | 3.58 | 1.99 | 6.43 | 0.97 | 4.53 | 4.63 | 5.69 | 1.64 | 2.70 | 3.88 | 4.43 | 4.88 | 45.35 |
| 1943 | 3.06 | 1.59 | 3.27 | 3.50 | 6.09 | 1.56 | 4.79 | 2.23 | 1.06 | 6.07 | 5.24 | 0.73 | 39.19 |
| 1944 | 1.37 | 2.13 | 4.15 | 4.17 | 1.17 | 8.10 | 1.32 | 0.67 | 7.50 | 2.01 | 4.16 | 3.60 | 40.35 |
| 1945 | 2.88 | 4.57 | 2.20 | 4.60 | 5.42 | 6.38 | 5.85 | 3.50 | 2.72 | 2.19 | 5.24 | 5.21 | 50.76 |
| 1946 | 3.06 | 3.03 | 1.49 | 2.63 | 5.52 | 3.74 | 4.91 | 6.75 | 6.23 | 1.09 | 1.44 | 3.39 | 43.28 |
| 1947 | 3.09 | 2.29 | 2.85 | 5.35 | 3.24 | 3.18 | 3.98 | 1.02 | 2.84 | 1.58 | 5.97 | 3.19 | 38.58 |
| 1948 | 4.07 | 2.27 | 3.86 | 2.89 | 7.81 | 6.22 | 5.87 | 1.84 | 1.03 | 3.26 | 7.13 | 3.14 | 49.39 |
| 1949 | 4.16 | 2.99 | 1.56 | 5.03 | 3.95 | 0.74 | 2.57 | 4.25 | 2.48 | 2.16 | 2.30 | 2.84 | 35.03 |
| 1950 | 4.44 | 3.02 | 3.09 | 3.73 | 3.32 | 2.48 | 4.81 | 4.24 | 1.55 | 2.99 | 6.64 | 4.14 | 44.45 |
| Av. 19 yrs. | 3.62 | 2.74 | 3.76 | 3.79 | 3.93 | 3.97 | 3.86 | 3.40 | 4.75 | 3.01 | 4.16 | 3.32 | 44.31 |

SALEM, MASS. (Sewage Pumping Station)—Elevation, 20 feet
Record: December, 1910; March, 1911, to December, 1950

| Year | Jan. | Feb. | Mar. | Apr. | May | June | July | Aug. | Sept. | Oct. | Nov. | Dec. | Annual |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1942 | 3.55 | 4.12 | 5.94 | 1.25 | 1.80 | 3.38 | 3.73 | 4.30 | 2.08 | 2.88 | 5.11 | 3.98 | 42.12 |
| 1943 | 2.72 | 1.17 | 3.75 | 2.61 | 5.30 | 1.79 | 3.74 | 1.55 | 1.68 | 4.52 | 3.44 | 1.02 | 33.29 |
| 1944 | 2.53 | 1.80 | 3.20 | 3.62 | 0.49 | 4.14 | 1.59 | 1.78 | 5.90 | 2.34 | 6.40 | 3.26 | 37.05 |
| 1945 | 2.49 | 3.19 | 1.65 | 2.98 | 4.29 | 6.26 | 4.29 | 3.36 | 1.26 | 2.65 | 6.72 | 6.60 | 45.74 |
| 1946 | 3.75 | 2.94 | 1.44 | 3.29 | 5.25 | 2.60 | 0.90 | 8.87 | 2.57 | 0.82 | 1.27 | 3.13 | 36.83 |
| 1947 | 2.16 | 0.72 | 2.06 | 3.83 | 3.56 | 2.27 | 4.56 | 1.76 | 2.92 | 0.51 | 5.65 | 3.04 | 33.04 |
| 1948 | 3.42 | 1.40 | 1.92 | 2.29 | 5.45 | 4.48 | 4.02 | 0.92 | 1.11 | 4.36 | 5.55 | 1.18 | 36.10 |
| 1949 | 3.17 | 3.14 | 0.88 | 3.53 | 3.79 | 0.72 | 2.07 | 4.24 | 4.92 | 2.30 | 3.93 | 1.77 | 34.46 |
| 1950 | 4.07 | 2.39 | 2.59 | 1.68 | 1.58 | 1.32 | 1.91 | 2.76 | 1.25 | 2.12 | 6.47 | 3.57 | 31.71 |
| Av. 39 yrs. | 3.08 | 2.68 | 3.23 | 3.75 | 3.29 | 3.31 | 3.43 | 3.42 | 3.41 | 2.85 | 3.64 | 3.31 | 39.40 |

SANDWICH, MASS. (Weather Bureau)
Record: January, 1946, to December, 1950

| Year | Jan. | Feb. | Mar. | Apr. | May | June | July | Aug. | Sept. | Oct. | Nov. | Dec. | Annual |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1946 | 3.85 | 3.41 | 1.44 | 2.96 | 4.91 | 3.75 | 1.69 | 17.85 | 2.59 | 0.34 | 0.89 | 3.79 | 47.47 |
| 1947 | 3.46 | 2.40 | 2.33 | 5.11 | 5.05 | 4.44 | 4.32 | 1.23 | 2.47 | 2.75 | 3.08 | 3.21 | 39.85 |
| 1948 | 6.40 | 3.52 | 4.00 | 5.43 | 9.08 | 2.50 | 1.68 | 0.90 | 1.15 | 5.63 | 5.50 | 2.11 | 47.90 |
| 1949 | 3.57 | 3.93 | 3.24 | 4.48 | 3.19 | T | 1.20 | 3.36 | 3.03 | 1.26 | 3.94 | 2.58 | 33.78 |
| 1950 | 3.44 | 4.33 | 4.02 | 3.64 | 3.75 | 2.32 | 1.42 | 3.14 | 1.87 | 1.16 | 6.57 | 3.93 | 39.59 |
| Av. 5 yrs. | 4.14 | 3.52 | 3.01 | 4.32 | 5.20 | 2.60 | 2.06 | 5.30 | 2.22 | 2.23 | 4.00 | 3.12 | 41.72 |

SCITUATE, MASS. (Greenbush, Water Co. Pumping Station)—Elevation, 20 feet
Record: January, 1930, to December, 1950

| Year | Jan. | Feb. | Mar. | Apr. | May | June | July | Aug. | Sept. | Oct. | Nov. | Dec. | Annual |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1942 | 3.30 | 3.03 | 7.49 | 1.19 | 1.68 | 2.66 | 3.98 | 2.47 | 2.40 | 3.11 | 6.02 | 3.98 | 41.31 |
| 1943 | 3.01 | 1.53 | 2.88 | 3.20 | 5.36 | 1.61 | 4.09 | 2.65 | 2.40 | 3.25 | 2.89 | 1.05 | 33.92 |
| 1944 | 2.18 | 1.83 | 3.92 | 3.42 | 0.18 | 3.27 | 1.74 | 0.54 | 9.32 | 2.43 | 7.26 | 3.00 | 39.09 |
| 1945 | 3.30 | 3.60 | 1.79 | 1.99 | 4.77 | 4.37 | 2.18 | 5.26 | 1.70 | 3.14 | 7.49 | 9.66 | 49.25 |
| 1946 | 3.92 | 2.87 | 1.50 | 2.67 | 4.34 | 3.72 | 1.20 | 8.08 | 2.44 | 0.32 | 0.95 | 4.54 | 36.55 |
| 1947 | 2.66 | 0.88 | 2.68 | 4.25 | 4.49 | 5.68 | 3.55 | 2.43 | 3.79 | 2.59 | 4.38 | 4.07 | 41.45 |
| 1948 | 5.95 | 2.00 | 3.39 | 2.77 | 7.03 | 2.78 | 5.72 | 3.12 | 1.05 | 5.32 | 4.95 | 1.49 | 45.57 |
| 1949 | 4.01 | 3.11 | 1.41 | 3.92 | 3.52 | 0.35 | 1.56 | 1.90 | 2.31 | 1.37 | 2.95 | 1.93 | 28.34 |
| 1950 | 3.73 | 4.12 | 3.49 | 2.28 | 1.51 | 1.87 | 2.67 | 4.52 | 2.17 | 1.77 | 6.72 | 4.00 | 38.85 |
| Av. 21 yrs. | 3.80 | 2.75 | 3.73 | 3.48 | 2.97 | 3.45 | 2.77 | 3.57 | 3.80 | 2.88 | 4.07 | 3.48 | 40.75 |

SHELBURNE, MASS. (Shelburne Falls)—Elevation, 370 feet
Record: April, 1914, to December, 1950

| Year | Jan. | Feb. | Mar. | Apr. | May | June | July | Aug. | Sept. | Oct. | Nov. | Dec. | Annual |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1942 | 2.67 | 3.28 | 6.87 | 1.78 | 5.00 | 5.13 | 6.14 | 3.45 | 5.58 | 2.85 | 7.27 | 6.82 | 56.84 |
| 1943 | 2.92 | 1.83 | 3.23 | 4.38 | 8.25 | 2.08 | 6.29 | 2.31 | 1.35 | 7.41 | 6.60 | 0.58 | 47.23 |
| 1944 | 1.81 | 2.45 | 4.75 | 4.48 | 1.82 | 7.10 | 4.58 | 2.64 | 6.59 | 2.24 | 3.77 | 4.73 | 46.96 |
| 1945 | 4.25 | 3.99 | 2.08 | 6.66 | 7.94 | 7.97 | 6.53 | 2.41 | 3.75 | 2.91 | 4.28 | 3.83 | 56.60 |
| 1946 | 3.46 | 3.33 | 1.38 | 2.16 | 7.34 | 6.03 | 3.84 | 2.94 | 5.08 | 2.49 | 0.97 | 4.91 | 43.93 |
| 1947 | 4.46 | 2.87 | 3.54 | 4.47 | 4.09 | 3.73 | 3.46 | 5.41 | 4.55 | 1.89 | 6.61 | 2.74 | 47.82 |
| 1948 | 3.03 | 2.98 | 3.06 | 3.39 | 7.87 | 5.53 | 3.27 | 2.08 | 1.48 | 2.14 | 4.97 | 4.86 | 44.66 |
| 1949 | 6.04 | 4.57 | 2.32 | 5.13 | 3.62 | 2.69 | 2.55 | 4.03 | 4.53 | 2.56 | 2.13 | 2.86 | 43.03 |
| 1950 | 5.37 | 4.18 | 4.37 | 3.13 | 4.10 | 3.24 | 2.20 | 4.05 | 2.43 | 2.37 | 6.46 | 5.44 | 47.34 |
| Av. 36 yrs. | 3.34 | 3.01 | 3.44 | 3.81 | 3.96 | 3.98 | 3.93 | 3.49 | 3.96 | 3.14 | 4.11 | 3.49 | 43.66 |

SHUTESBURY, MASS.—Elevation, 1,175 feet
Record: October, 1919, to December, 1950

| Year | Jan. | Feb. | Mar. | Apr. | May | June | July | Aug. | Sept. | Oct. | Nov. | Dec. | Annual |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1942 | 3.98 | 1.80 | 7.51 | 1.06 | 3.34 | 4.64 | 5.14 | 3.93 | 4.08 | 4.13 | 5.27 | 6.06 | 50.94 |
| 1943 | 3.13 | 1.17 | 3.32 | 3.51 | 5.95 | 1.88 | 4.87 | 4.35 | 2.24 | 4.76 | 5.03 | 0.59 | 40.80 |
| 1944 | 1.54 | 2.24 | 4.75 | 3.58 | 1.49 | 7.72 | 4.80 | 2.44 | 6.18 | 2.40 | 4.52 | 2.99 | 44.65 |
| 1945 | 3.27 | 4.24 | 1.60 | 6.04 | 6.58 | 10.34 | 8.11 | 2.83 | 4.02 | 2.93 | 4.62 | 4.56 | 59.14 |
| 1946 | 2.86 | 3.63 | 1.55 | 2.40 | 7.34 | 4.29 | 5.80 | 5.05 | 5.79 | 1.91 | 1.17 | 2.61 | 44.40 |
| 1947 | 3.47 | 2.49 | 2.53 | 4.50 | 4.64 | 3.82 | 2.59 | 2.29 | 4.08 | 2.37 | 5.82 | 2.86 | 41.46 |
| 1948 | 3.17 | 2.88 | 3.73 | 3.36 | 6.66 | 6.83 | 3.30 | 3.01 | 2.13 | 1.00 | 5.71 | 3.49 | 45.27 |
| 1949 | 5.35 | 3.00 | 1.43 | 3.16 | 5.12 | 0.82 | 3.45 | 2.29 | 2.87 | 2.76 | 2.03 | 3.80 | 36.08 |
| 1950 | 4.74 | 3.57 | 3.00 | 4.41 | 3.35 | 4.48 | 3.22 | 3.74 | 1.53 | 2.98 | 7.40 | 4.94 | 47.36 |
| Av. 31 yrs. | 3.72 | 3.21 | 3.67 | 4.08 | 4.22 | 5.00 | 4.34 | 4.13 | 4.65 | 3.19 | 4.38 | 3.82 | 48.41 |

SOUTHAMPTON, MASS. (Fomer Reservoir, Holyoke Water Works)—Elevation, 525 feet
Record: January, 1897, to December, 1950

| Year | Jan. | Feb. | Mar. | Apr. | May | June | July | Aug. | Sept. | Oct. | Nov. | Dec. | Annual |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1942 | 2.54 | 3.35 | 6.80 | 1.45 | 5.38 | 3.55 | 6.42 | 2.56 | 5.72 | 5.03 | 6.05 | 5.94 | 54.79 |
| 1943 | 2.92 | 1.53 | 4.05 | 3.96 | 6.93 | 3.65 | 6.14 | 1.75 | 1.72 | 7.02 | 4.95 | 0.63 | 45.25 |
| 1944 | 1.65 | 2.44 | 4.98 | 4.02 | 0.83 | 4.85 | 2.52 | 3.51 | 5.11 | 2.09 | 4.20 | 3.78 | 39.98 |
| 1945 | 3.82 | 5.31 | 2.11 | 6.03 | 7.13 | 5.28 | 7.07 | 3.32 | 5.04 | 2.21 | 4.00 | 4.38 | 55.70 |
| 1946 | 2.77 | 3.73 | 1.32 | 1.97 | 6.87 | 3.55 | 4.70 | 4.57 | 5.09 | 1.13 | 0.72 | 2.90 | 39.32 |
| 1947 | 3.23 | 2.69 | 3.68 | 3.98 | 5.81 | 3.74 | 3.58 | 4.05 | 3.06 | 1.04 | 6.77 | 1.88 | 43.51 |
| 1948 | 2.55 | 2.59 | 2.91 | 2.12 | 5.95 | 6.30 | 2.18 | 3.21 | 1.58 | 2.05 | 4.52 | 5.58 | 41.54 |
| 1949 | 5.78 | 2.83 | 3.10 | 3.91 | 4.36 | 0.54 | 3.35 | 3.50 | 4.13 | 2.15 | 2.01 | 2.48 | 38.14 |
| 1950 | 4.11 | 2.18 | 3.67 | 3.45 | 5.23 | 4.78 | 2.27 | 4.24 | 1.66 | 2.70 | 6.86 | 5.08 | 46.23 |
| Av. 54 yrs. | 3.80 | 3.60 | 4.04 | 3.99 | 4.34 | 4.37 | 4.28 | 4.28 | 4.30 | 3.57 | 3.96 | 3.72 | 48.25 |

SOUTHBOROUGH, MASS. (Cordaville, Metropolitan Water Works)—Elevation, 250 feet
Record: January, 1894, to June, 1944 (see Hopkinton)

| Year | Jan. | Feb. | Mar. | Apr. | May | June | July | Aug. | Sept. | Oct. | Nov. | Dec. | Annual |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1942 | 4.52 | 3.04 | 7.79 | 1.85 | 2.94 | 2.88 | 7.74 | 2.35 | 2.19 | 3.24 | 5.41 | 7.17 | 51.12 |
| 1943 | 3.30 | 1.67 | 4.10 | 3.66 | 5.07 | 2.60 | 5.00 | 1.60 | 1.04 | 6.07 | 4.28 | 1.37 | 39.76 |
| 1944 | 1.74 | 2.83 | 4.82 | 5.12 | 0.94 | 4.58 | | | | | | | |
| (See Hopkinton) | | | | | | | | | | | | | |
| Av. 49 yrs. | 4.07 | 3.90 | 4.43 | 4.09 | 3.37 | 3.82 | 3.86 | 3.81 | 4.05 | 3.49 | 4.05 | 4.01 | 46.95 |

RUTLAND, MASS. (Muschopauge Pond)
Record: April, 1931, to December, 1950

| Year | Jan. | Feb. | Mar. | Apr. | May | June | July | Aug. | Sept. | Oct. | Nov. | Dec. | Annual |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1942 | 3.58 | 1.99 | 6.43 | 0.97 | 4.53 | 4.63 | 5.69 | 1.64 | 2.70 | 3.88 | 4.43 | 4.88 | 45.35 |
| 1943 | 3.06 | 1.59 | 3.27 | 3.50 | 6.09 | 1.56 | 4.79 | 2.23 | 1.06 | 6.07 | 5.24 | 0.73 | 39.19 |
| 1944 | 1.37 | 2.13 | 4.15 | 4.17 | 1.17 | 8.10 | 1.32 | 0.67 | 7.50 | 2.01 | 4.16 | 3.60 | 40.35 |
| 1945 | 2.88 | 4.57 | 2.20 | 4.60 | 5.42 | 6.38 | 5.85 | 3.50 | 2.72 | 2.19 | 5.24 | 5.21 | 50.76 |
| 1946 | 3.06 | 3.03 | 1.49 | 2.63 | 5.52 | 3.74 | 4.91 | 6.75 | 6.23 | 1.09 | 1.44 | 3.39 | 43.28 |
| 1947 | 3.09 | 2.29 | 2.85 | 5.35 | 3.24 | 3.18 | 3.98 | 1.02 | 2.84 | 1.58 | 5.97 | 3.19 | 38.58 |
| 1948 | 4.07 | 2.27 | 3.86 | 2.89 | 7.81 | 6.22 | 5.87 | 1.84 | 1.03 | 3.26 | 7.13 | 3.14 | 49.39 |
| 1949 | 4.16 | 2.99 | 1.56 | 5.03 | 3.95 | 0.74 | 2.57 | 4.25 | 2.48 | 2.16 | 2.30 | 2.84 | 35.03 |
| 1950 | 4.44 | 3.02 | 3.09 | 3.73 | 3.32 | 2.48 | 4.81 | 4.24 | 1.55 | 2.99 | 6.64 | 4.14 | 44.45 |
| Av. 19 yrs. | 3.62 | 2.74 | 3.76 | 3.79 | 3.93 | 3.97 | 3.86 | 3.40 | 4.75 | 3.01 | 4.16 | 3.32 | 44.31 |

SALEM, MASS. (Sewage Pumping Station)—Elevation, 20 feet
Record: December, 1910; March, 1911, to December, 1950

| Year | Jan. | Feb. | Mar. | Apr. | May | June | July | Aug. | Sept. | Oct. | Nov. | Dec. | Annual |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1942 | 3.55 | 4.12 | 5.94 | 1.25 | 1.80 | 3.38 | 3.73 | 4.30 | 2.08 | 2.88 | 5.11 | 3.98 | 42.12 |
| 1943 | 2.72 | 1.17 | 3.75 | 2.61 | 5.30 | 1.79 | 3.74 | 1.55 | 1.68 | 4.52 | 3.44 | 1.02 | 33.29 |
| 1944 | 2.53 | 1.80 | 3.20 | 3.62 | 0.49 | 4.14 | 1.59 | 1.78 | 5.90 | 2.34 | 6.40 | 3.26 | 37.05 |
| 1945 | 2.49 | 3.19 | 1.65 | 2.98 | 4.29 | 6.26 | 4.29 | 3.36 | 1.26 | 2.65 | 6.72 | 6.60 | 45.74 |
| 1946 | 3.75 | 2.94 | 1.44 | 3.29 | 5.25 | 2.60 | 0.90 | 8.87 | 2.57 | 0.82 | 1.27 | 3.13 | 36.83 |
| 1947 | 2.16 | 0.72 | 2.06 | 3.83 | 3.56 | 2.27 | 4.56 | 1.76 | 2.92 | 0.51 | 5.65 | 3.04 | 33.04 |
| 1948 | 3.42 | 1.40 | 1.92 | 2.29 | 5.45 | 4.48 | 4.02 | 0.92 | 1.11 | 4.36 | 5.55 | 1.18 | 36.10 |
| 1949 | 3.17 | 3.14 | 0.88 | 3.53 | 3.79 | 0.72 | 2.07 | 4.24 | 4.92 | 2.30 | 3.93 | 1.77 | 34.46 |
| 1950 | 4.07 | 2.39 | 2.59 | 1.68 | 1.58 | 1.32 | 1.91 | 2.76 | 1.25 | 2.12 | 6.47 | 3.57 | 31.71 |
| Av. 39 yrs. | 3.08 | 2.68 | 3.23 | 3.75 | 3.29 | 3.31 | 3.43 | 3.42 | 3.41 | 2.85 | 3.64 | 3.31 | 39.40 |

SANDWICH, MASS. (Weather Bureau)
Record: January, 1946, to December, 1950

| Year | Jan. | Feb. | Mar. | Apr. | May | June | July | Aug. | Sept. | Oct. | Nov. | Dec. | Annual |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1946 | 3.85 | 3.41 | 1.44 | 2.96 | 4.91 | 3.75 | 1.69 | 17.85 | 2.59 | 0.34 | 0.89 | 3.79 | 47.47 |
| 1947 | 3.46 | 2.40 | 2.33 | 5.11 | 5.05 | 4.44 | 4.32 | 1.23 | 2.47 | 2.75 | 3.08 | 3.21 | 39.85 |
| 1948 | 6.40 | 3.52 | 4.00 | 5.43 | 9.08 | 2.50 | 1.68 | 0.90 | 1.15 | 5.63 | 5.50 | 2.11 | 47.90 |
| 1949 | 3.57 | 3.93 | 3.24 | 4.48 | 3.19 | T | 1.20 | 3.36 | 3.03 | 1.26 | 3.94 | 2.58 | 33.78 |
| 1950 | 3.44 | 4.33 | 4.02 | 3.64 | 3.75 | 2.32 | 1.42 | 3.14 | 1.87 | 1.16 | 6.57 | 3.93 | 39.59 |
| Av. 5 yrs. | 4.14 | 3.52 | 3.01 | 4.32 | 5.20 | 2.60 | 2.06 | 5.30 | 2.22 | 2.23 | 4.00 | 3.12 | 41.72 |

SCITUATE, MASS. (Greenbush, Water Co. Pumping Station)—Elevation, 20 feet
Record: January, 1930, to December, 1950

| Year | Jan. | Feb. | Mar. | Apr. | May | June | July | Aug. | Sept. | Oct. | Nov. | Dec. | Annual |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1942 | 3.30 | 3.03 | 7.49 | 1.19 | 1.68 | 2.66 | 3.98 | 2.47 | 2.40 | 3.11 | 6.02 | 3.98 | 41.31 |
| 1943 | 3.01 | 1.53 | 2.88 | 3.20 | 5.36 | 1.61 | 4.09 | 2.65 | 2.40 | 3.25 | 2.89 | 1.05 | 33.92 |
| 1944 | 2.18 | 1.83 | 3.92 | 3.42 | 0.18 | 3.27 | 1.74 | 0.54 | 9.32 | 2.43 | 7.26 | 3.00 | 39.09 |
| 1945 | 3.30 | 3.60 | 1.79 | 1.99 | 4.77 | 4.37 | 2.18 | 5.26 | 1.70 | 3.14 | 7.49 | 9.66 | 49.25 |
| 1946 | 3.92 | 2.87 | 1.50 | 2.67 | 4.34 | 3.72 | 1.20 | 8.08 | 2.44 | 0.32 | 0.95 | 4.54 | 36.55 |
| 1947 | 2.66 | 0.88 | 2.68 | 4.25 | 4.49 | 5.68 | 3.55 | 2.43 | 3.79 | 2.59 | 4.38 | 4.07 | 41.45 |
| 1948 | 5.95 | 2.00 | 3.39 | 2.77 | 7.03 | 2.78 | 5.72 | 3.12 | 1.05 | 5.32 | 4.95 | 1.49 | 45.57 |
| 1949 | 4.01 | 3.11 | 1.41 | 3.92 | 3.52 | 0.35 | 1.56 | 1.90 | 2.31 | 1.37 | 2.95 | 1.93 | 28.34 |
| 1950 | 3.73 | 4.12 | 3.49 | 2.28 | 1.51 | 1.87 | 2.67 | 4.52 | 2.17 | 1.77 | 6.72 | 4.00 | 38.85 |
| Av. 21 yrs. | 3.80 | 2.75 | 3.73 | 3.48 | 2.97 | 3.45 | 2.77 | 3.57 | 3.80 | 2.88 | 4.07 | 3.48 | 40.75 |

SHELBURNE, MASS. (Shelburne Falls)—Elevation, 370 feet
Record: April, 1914, to December, 1950

| Year | Jan. | Feb. | Mar. | Apr. | May | June | July | Aug. | Sept. | Oct. | Nov. | Dec. | Annual |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1942 | 2.67 | 3.28 | 6.87 | 1.78 | 5.00 | 5.13 | 6.14 | 3.45 | 5.58 | 2.85 | 7.27 | 6.82 | 56.84 |
| 1943 | 2.92 | 1.83 | 3.23 | 4.38 | 8.25 | 2.08 | 6.29 | 2.31 | 1.35 | 7.41 | 6.60 | 0.58 | 47.23 |
| 1944 | 1.81 | 2.45 | 4.75 | 4.48 | 1.82 | 7.10 | 4.58 | 2.64 | 6.59 | 2.24 | 3.77 | 4.73 | 46.96 |
| 1945 | 4.25 | 3.99 | 2.08 | 6.66 | 7.94 | 7.97 | 6.53 | 2.41 | 3.75 | 2.91 | 4.28 | 3.83 | 56.60 |
| 1946 | 3.46 | 3.33 | 1.38 | 2.16 | 7.34 | 6.03 | 3.84 | 2.94 | 5.08 | 2.49 | 0.97 | 4.91 | 43.93 |
| 1947 | 4.46 | 2.87 | 3.54 | 4.47 | 4.09 | 3.73 | 3.46 | 5.41 | 4.55 | 1.89 | 6.61 | 2.74 | 47.82 |
| 1948 | 3.03 | 2.98 | 3.06 | 3.39 | 7.87 | 5.53 | 3.27 | 2.08 | 1.48 | 2.14 | 4.97 | 4.86 | 44.66 |
| 1949 | 6.04 | 4.57 | 2.32 | 5.13 | 3.62 | 2.69 | 2.55 | 4.03 | 4.53 | 2.56 | 2.13 | 2.86 | 43.03 |
| 1950 | 5.37 | 4.18 | 4.37 | 3.13 | 4.10 | 3.24 | 2.20 | 4.05 | 2.43 | 2.37 | 6.46 | 5.44 | 47.84 |
| Av. 36 yrs. | 3.34 | 3.01 | 3.44 | 3.81 | 3.96 | 3.98 | 3.93 | 3.49 | 3.96 | 3.14 | 4.11 | 3.49 | 43.66 |

SHUTESBURY, MASS.—Elevation, 1,175 feet
Record: October, 1919, to December, 1950

| Year | Jan. | Feb. | Mar. | Apr. | May | June | July | Aug. | Sept. | Oct. | Nov. | Dec. | Annual |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1942 | 3.98 | 1.80 | 7.51 | 1.06 | 3.34 | 4.64 | 5.14 | 3.93 | 4.08 | 4.13 | 5.27 | 6.06 | 50.94 |
| 1943 | 3.13 | 1.17 | 3.32 | 3.51 | 5.95 | 1.88 | 4.87 | 4.35 | 2.24 | 4.76 | 5.03 | 0.59 | 40.80 |
| 1944 | 1.54 | 2.24 | 4.75 | 3.58 | 1.49 | 7.72 | 4.80 | 2.44 | 6.18 | 2.40 | 4.52 | 2.99 | 44.65 |
| 1945 | 3.27 | 4.24 | 1.60 | 6.04 | 6.58 | 10.34 | 8.11 | 2.83 | 4.02 | 2.93 | 4.62 | 4.56 | 59.14 |
| 1946 | 2.86 | 3.63 | 1.55 | 2.40 | 7.34 | 4.29 | 5.80 | 5.05 | 5.79 | 1.91 | 1.17 | 2.61 | 44.40 |
| 1947 | 3.47 | 2.49 | 2.53 | 4.50 | 4.64 | 3.82 | 2.59 | 2.29 | 4.08 | 2.37 | 5.82 | 2.86 | 41.46 |
| 1948 | 3.17 | 2.88 | 3.73 | 3.36 | 6.66 | 6.83 | 3.30 | 3.01 | 2.13 | 1.00 | 5.71 | 3.49 | 45.27 |
| 1949 | 5.35 | 3.00 | 1.43 | 3.16 | 5.12 | 0.82 | 3.45 | 2.29 | 2.87 | 2.76 | 2.03 | 3.80 | 36.08 |
| 1950 | 4.74 | 3.57 | 3.00 | 4.41 | 3.35 | 4.48 | 3.22 | 3.74 | 1.53 | 2.98 | 7.40 | 4.94 | 47.36 |
| Av. 31 yrs. | 3.72 | 3.21 | 3.67 | 4.08 | 4.22 | 5.00 | 4.34 | 4.13 | 4.65 | 3.19 | 4.38 | 3.82 | 48.41 |

SOUTHAMPTON, MASS. (Fomer Reservoir, Holyoke Water Works)—Elevation, 525 feet
Record: January, 1897, to December, 1950

| Year | Jan. | Feb. | Mar. | Apr. | May | June | July | Aug. | Sept. | Oct. | Nov. | Dec. | Annual |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1942 | 2.54 | 3.35 | 6.80 | 1.45 | 5.38 | 3.55 | 6.42 | 2.56 | 5.72 | 5.03 | 6.05 | 5.94 | 54.79 |
| 1943 | 2.92 | 1.53 | 4.05 | 3.96 | 6.93 | 3.65 | 6.14 | 1.75 | 1.72 | 7.02 | 4.95 | 0.63 | 45.25 |
| 1944 | 1.65 | 2.44 | 4.98 | 4.02 | 0.83 | 4.85 | 2.52 | 3.51 | 5.11 | 2.09 | 4.20 | 3.78 | 39.98 |
| 1945 | 3.82 | 5.31 | 2.11 | 6.03 | 7.13 | 5.28 | 7.07 | 3.32 | 5.04 | 2.21 | 4.00 | 4.38 | 55.70 |
| 1946 | 2.77 | 3.73 | 1.32 | 1.97 | 6.87 | 3.55 | 4.70 | 4.57 | 5.09 | 1.13 | 0.72 | 2.90 | 39.32 |
| 1947 | 3.23 | 2.69 | 3.68 | 3.98 | 5.81 | 3.74 | 3.58 | 4.05 | 3.06 | 1.04 | 6.77 | 1.88 | 43.51 |
| 1948 | 2.55 | 2.59 | 2.91 | 2.12 | 5.95 | 6.30 | 2.18 | 3.21 | 1.58 | 2.05 | 4.52 | 5.58 | 41.54 |
| 1949 | 5.78 | 2.83 | 3.10 | 3.91 | 4.36 | 0.54 | 3.35 | 3.50 | 4.13 | 2.15 | 2.01 | 2.48 | 38.14 |
| 1950 | 4.11 | 2.18 | 3.67 | 3.45 | 5.23 | 4.78 | 2.27 | 4.24 | 1.66 | 2.70 | 6.86 | 5.08 | 46.23 |
| Av. 54 yrs. | 3.80 | 3.60 | 4.04 | 3.99 | 4.34 | 4.37 | 4.28 | 4.28 | 4.30 | 3.57 | 3.96 | 3.72 | 48.25 |

SOUTHBOROUGH, MASS. (Cordaville, Metropolitan Water Works)—Elevation, 250 feet
Record: January, 1894, to June, 1944 (see Hopkinton)

| Year | Jan. | Feb. | Mar. | Apr. | May | June | July | Aug. | Sept. | Oct. | Nov. | Dec. | Annual |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1942 | 4.52 | 3.04 | 7.79 | 1.85 | 2.94 | 2.88 | 7.74 | 2.35 | 2.19 | 3.24 | 5.41 | 7.17 | 51.12 |
| 1943 | 3.30 | 1.67 | 4.10 | 3.66 | 5.07 | 2.60 | 5.00 | 1.60 | 1.04 | 6.07 | 4.28 | 1.37 | 39.76 |
| 1944 | 1.74 | 2.83 | 4.82 | 5.12 | 0.94 | 4.58 | | | | | | | |
| (See Hopkinton) | | | | | | | | | | | | | |
| Av. 49 yrs. | 4.07 | 3.90 | 4.43 | 4.09 | 3.37 | 3.82 | 3.86 | 3.81 | 4.05 | 3.49 | 4.05 | 4.01 | 46.95 |

SOUTHBOROUGH, MASS. (Sudbury Dam)—Elevation, 260 feet
Record: January, 1899, to December, 1950

| Year | Jan. | Feb. | Mar. | Apr. | May | June | July | Aug. | Sept. | Oct. | Nov. | Dec. | Annual |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1942 | 4.17 | 3.13 | 7.30 | 1.75 | 2.46 | 3.12 | 8.27 | 2.38 | 1.78 | 3.13 | 4.96 | 7.10 | 49.55 |
| 1943 | 3.37 | 1.33 | 4.28 | 3.43 | 4.67 | 2.27 | 4.42 | 2.00 | 0.70 | 5.71 | 4.12 | 1.17 | 37.47 |
| 1944 | 1.84 | 2.55 | 4.71 | 4.36 | 0.80 | 5.55 | 1.24 | 1.40 | 5.72 | 2.06 | 6.70 | 3.63 | 40.56 |
| 1945 | 3.08 | 5.22 | 2.13 | 3.08 | 5.16 | 6.60 | 3.32 | 4.00 | 1.66 | 2.29 | 7.12 | 6.55 | 50.21 |
| 1946 | 3.97 | 3.59 | 1.84 | 2.68 | 5.06 | 2.95 | 2.06 | 8.21 | 4.38 | 0.34 | 1.12 | 4.14 | 40.34 |
| 1947 | 2.83 | 2.22 | 3.08 | 4.67 | 3.47 | 3.30 | 5.07 | 2.19 | 3.19 | 0.90 | 5.20 | 4.29 | 40.41 |
| 1948 | 5.46 | 2.10 | 3.57 | 2.92 | 5.39 | 5.12 | 5.06 | 1.13 | 0.70 | 2.69 | 6.12 | 1.58 | 41.84 |
| 1949 | 3.55 | 3.40 | 1.89 | 3.82 | 3.93 | 0.97 | 1.75 | 3.94 | 2.45 | 1.67 | 2.61 | 2.22 | 32.20 |
| 1950 | 4.41 | 3.84 | 3.35 | 3.24 | 1.55 | 2.03 | 2.47 | 5.80 | 1.44 | 2.88 | 5.53 | 3.90 | 40.44 |
| Av. 52 yrs. | 3.73 | 3.59 | 4.06 | 3.77 | 3.17 | 3.64 | 3.41 | 3.44 | 3.53 | 2.82 | 3.68 | 3.71 | 42.55 |

SOUTHBRIDGE, MASS. (Hatchet Brook, Southbridge Water Supply Co.)—Elevation, 720 feet
Record: January, 1912, to December, 1950

| Year | Jan. | Feb. | Mar. | Apr. | May | June | July | Aug. | Sept. | Oct. | Nov. | Dec. | Annual |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1942 | 4.36 | 2.64 | 7.80 | 1.21 | 2.69 | 4.23 | 5.14 | 3.25 | 2.46 | 3.74 | 6.06 | 5.93 | 49.51 |
| 1943 | 3.84 | 1.96 | 4.23 | 3.91 | 5.15 | 2.82 | 4.50 | 1.47 | 0.88 | 6.01 | 5.47 | 0.92 | 41.16 |
| 1944 | 1.52 | 2.62 | 4.77 | 4.95 | 1.15 | 5.85 | 2.91 | 1.52 | 7.36 | 2.33 | 5.35 | 3.91 | 44.24 |
| 1945 | 3.26 | 5.08 | 2.29 | 4.63 | 5.25 | 4.96 | 2.14 | 3.59 | 1.35 | 2.65 | 5.93 | 5.79 | 46.92 |
| 1946 | 3.79 | 3.31 | 1.52 | 2.91 | 6.28 | 3.96 | 4.35 | 8.57 | 5.15 | 0.63 | 1.59 | 3.46 | 45.52 |
| 1947 | 3.12 | 2.03 | 3.01 | 4.68 | 3.12 | 3.56 | 6.22 | 3.19 | 3.53 | 2.07 | 6.30 | 2.53 | 43.36 |
| 1948 | 3.89 | 2.08 | 4.75 | 3.94 | 6.67 | 7.09 | 4.54 | 2.00 | 0.55 | 2.02 | 5.97 | 3.69 | 47.19 |
| 1949 | 4.64 | 3.33 | 1.86 | 3.48 | 4.57 | 0.27 | 1.05 | 4.90 | 2.26 | 1.74 | 2.60 | 3.33 | 34.03 |
| 1950 | 4.10 | 4.05 | 3.22 | 4.66 | 3.99 | 3.78 | 3.02 | 6.00 | 1.92 | 2.69 | 5.41 | 4.35 | 47.19 |
| Av. 39 yrs. | 3.67 | 3.34 | 3.94 | 3.97 | 3.90 | 3.97 | 4.03 | 4.10 | 3.98 | 3.13 | 4.03 | 3.61 | 45.67 |

SPRINGFIELD, MASS. (1848-1867, by Citizen of Springfield; 1868-1918, at United States Arsenal)—Elevation, 200 feet
Record: January, 1848, to December, 1950

| Year | Jan. | Feb. | Mar. | Apr. | May | June | July | Aug. | Sept. | Oct. | Nov. | Dec. | Annual |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1942 | 3.27 | 2.77 | 5.45 | 0.43 | 4.27 | 4.71 | 6.96 | 2.00 | 4.73 | 3.45 | 5.12 | 5.96 | 49.12 |
| 1943 | 2.97 | 1.59 | 3.23 | 3.07 | 5.76 | 2.78 | 6.59 | 0.90 | 0.89 | 4.50 | 4.34 | 0.69 | 37.31 |
| 1944 | 1.37 | 2.06 | 4.21 | 4.68 | 0.87 | 4.75 | 1.85 | 3.25 | 6.44 | 2.06 | 4.99 | 2.73 | 39.26 |
| 1945 | 3.78 | 3.34 | 1.90 | 6.05 | 6.73 | 5.66 | 5.57 | 4.09 | 1.66 | 2.12 | 4.00 | 5.42 | 50.32 |
| 1946 | 3.03 | 2.03 | 1.18 | 2.00 | 5.99 | 2.58 | 4.36 | 5.72 | 2.57 | 1.13 | 1.20 | 2.96 | 34.75 |
| 1947 | 3.81 | 2.57 | 2.33 | 4.07 | 5.63 | 3.09 | 3.52 | 3.66 | 4.03 | 3.10 | 5.43 | 2.46 | 43.70 |
| 1948 | 3.05 | 1.81 | 3.49 | 3.32 | 6.29 | 5.31 | 3.62 | 4.00 | 0.84 | 1.18 | 6.15 | 3.13 | 42.19 |
| 1949 | 5.03 | 2.18 | 2.99 | 2.97 | 4.59 | 0.75 | 1.96 | 4.89 | 2.67 | 2.42 | 1.97 | 3.53 | 35.95 |
| 1950 | 4.31 | 5.05* | 2.20 | 3.04 | 3.83 | 3.84 | 2.77 | 5.22 | 2.01 | 1.72 | 3.33 | 4.36 | 41.68 |
| Av. 103 yrs. | 3.39 | 3.31 | 3.55 | 3.28 | 3.81 | 3.78 | 4.27 | 4.19 | 3.52 | 3.57 | 3.56 | 3.30 | 43.53 |

*Interpolated.

STERLING, MASS. (Metropolitan Water Works)—Elevation, 555 feet
Record: January, 1897, to December, 1950

| Year | Jan. | Feb. | Mar. | Apr. | May | June | July | Aug. | Sept. | Oct. | Nov. | Dec. | Annual |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1942 | 4.53 | 2.90 | 7.48 | 1.41 | 4.32 | 5.24 | 5.12 | 1.95 | 2.35 | 3.39 | 5.06 | 5.78 | 49.53 |
| 1943 | 3.41 | 1.65 | 3.16 | 3.74 | 5.56 | 1.65 | 4.04 | 2.17 | 1.03 | 6.30 | 4.95 | 0.72 | 38.38 |
| 1944 | 1.61 | 2.70 | 4.52 | 4.50 | 1.17 | 9.04 | 1.06 | 0.63 | 6.33 | 2.26 | 4.61 | 3.51 | 41.94 |
| 1945 | 4.73 | 4.58 | 2.46 | 4.34 | 5.49 | 6.69 | 4.90 | 3.94 | 2.40 | 1.87 | 5.64 | 6.29 | 53.33 |
| 1946 | 3.69 | 3.77 | 1.73 | 2.70 | 5.82 | 3.07 | 4.06 | 6.33 | 6.73 | 0.82 | 1.18 | 5.16 | 45.06 |
| 1947 | 3.17 | 3.00 | 3.62 | 4.53 | 3.90 | 2.71 | 3.20 | 1.14 | 3.92 | 1.29 | 6.86 | 4.32 | 41.66 |
| 1948 | 3.52 | 3.20 | 3.63 | 3.58 | 7.11 | 5.29 | 5.47 | 1.76 | 0.73 | 2.93 | 7.18 | 2.70 | 47.10 |
| 1949 | 4.47 | 3.28 | 1.99 | 4.37 | 3.71 | 0.47 | 2.25 | 3.10 | 2.81 | 2.34 | 2.62 | 3.87 | 35.28 |
| 1950 | 5.13 | 3.11 | 3.75 | 3.48 | 2.54 | 2.34 | 2.94 | 3.24 | 1.35 | 2.89 | 5.54 | 4.04 | 49.25 |
| Av. 54 yrs. | 3.68 | 3.48 | 3.94 | 3.77 | 3.41 | 3.81 | 3.70 | 3.47 | 3.66 | 3.04 | 3.83 | 3.85 | 43.64 |

STOCKBRIDGE, MASS. (Stockbridge Water Company)—Elevation, 875 feet
Record: October, 1919, to December, 1950

| Year | Jan. | Feb. | Mar. | Apr. | May | June | July | Aug. | Sept. | Oct. | Nov. | Dec. | Annual |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1942 | 3.02 | 1.38 | 5.19 | 1.84 | 3.74 | 3.73 | 6.47 | 2.36 | 6.23 | 4.99 | 6.89 | 3.44 | 49.28 |
| 1943 | 4.33 | 1.60 | 2.60 | 3.49 | 6.24 | 3.81 | 4.51 | 1.77 | 1.78 | 4.53 | 7.13 | 0.32 | 42.11 |
| 1944 | 1.94 | 1.55 | 2.80 | 4.48 | 1.23 | 6.78 | 7.19 | 1.62 | 4.90 | 2.42 | 3.66 | 2.87 | 41.44 |
| 1945 | 3.50 | 2.48 | 3.07 | 5.72 | 4.78 | 4.79 | 8.58 | 5.66 | 2.35 | 2.10 | 4.77 | 3.24 | 51.04 |
| 1946 | 2.71 | 3.60 | 1.05 | 1.86 | 6.10 | 3.49 | 5.30 | 3.38 | 6.48 | 2.55 | 0.70 | 2.82 | 40.04 |
| 1947 | 3.07 | 2.07 | 2.14 | 5.37 | 3.92 | 3.32 | 2.73 | 2.93 | 3.34 | 3.37 | 4.10 | 2.35 | 38.71 |
| 1948 | 2.10 | 2.05 | 4.28 | 3.00 | 6.44 | 8.36 | 3.45 | 3.47 | 1.91 | 1.59 | 4.60 | 10.62 | 51.87 |
| 1949 | 4.37 | 2.74 | 1.99 | 3.22 | 4.84 | 2.77 | 5.04 | 3.01 | 3.87 | 2.49 | 1.75 | 2.74 | 38.83 |
| 1950 | 4.35 | 3.00 | 2.20 | 2.53 | 3.20 | 4.69 | 3.37 | 3.29 | 1.92 | 1.40 | 6.44 | 3.12 | 39.51 |
| Av. 31 yrs. | 3.02 | 2.62 | 3.26 | 3.70 | 3.83 | 4.46 | 4.57 | 4.17 | 4.37 | 3.10 | 4.04 | 2.90 | 44.04 |

STOCKBRIDGE, MASS. (U.S.W.B.)—Elevation, 850 feet
Record: January, 1930, to December, 1950

| Year | Jan. | Feb. | Mar. | Apr. | May | June | July | Aug. | Sept. | Oct. | Nov. | Dec. | Annual |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1942 | 3.13 | 1.36 | 5.30 | 1.70 | 4.16 | 4.14 | 7.00 | 3.08 | 5.51 | 3.23 | 6.04 | 5.01 | 49.66 |
| 1943 | 2.46 | 1.50 | 3.53 | 3.43 | 5.58 | 2.96 | 6.50 | 2.38 | 1.90 | 3.89 | 5.32 | 0.75 | 40.20 |
| 1944 | 1.56 | 2.26 | 4.12 | 3.37 | 1.05 | 5.45 | 5.68 | 2.47 | 5.22 | 2.34 | 4.74 | 2.07 | 40.34 |
| 1945 | 3.83 | 2.97 | 2.66 | 5.74 | 6.54 | 6.28 | 11.73 | 3.99 | 3.95 | 2.34 | 5.02 | 3.55 | 58.60 |
| 1946 | 1.95 | 3.06 | 1.05 | 1.78 | 5.50 | 5.00 | 4.28 | 3.13 | 5.47 | 2.49 | 1.04 | 2.65 | 37.40 |
| 1947 | 3.51 | 2.82 | 2.99 | 4.50 | 4.29 | 3.30 | 3.47 | 1.80 | 2.98 | 3.05 | 4.65 | 2.22 | 39.58 |
| 1948 | 2.28 | 2.08 | 3.88 | 3.50 | 6.75 | 8.59 | 4.40 | 3.85 | 2.22 | 1.60 | 4.08 | 9.73 | 52.96 |
| 1949 | 4.40 | 3.06 | 1.57 | 2.78 | 4.78 | 3.19 | 6.15 | 2.93 | 4.25 | 2.38 | 1.71 | 3.30 | 40.50 |
| 1950 | 4.35 | 3.00 | 2.20 | 2.53 | 3.20 | 4.69 | 3.37 | 3.29 | 1.92 | 1.40 | 6.44 | 3.12 | 39.51 |
| Av. 21 yrs. | 3.19 | 2.39 | 3.27 | 3.24 | 4.03 | 4.55 | 4.78 | 4.01 | 4.53 | 2.78 | 3.78 | 3.12 | 43.67 |

STONEHAM, MASS. (Spot Pond, Metropolitan Water Works)—Elevation, 160 feet
Record: January, 1899, to December, 1950

| Year | Jan. | Feb. | Mar. | Apr. | May | June | July | Aug. | Sept. | Oct. | Nov. | Dec. | Annual |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1942 | 4.44 | 3.72 | 7.64 | 2.20 | 2.45 | 3.99 | 3.21 | 2.74 | 2.22 | 3.30 | 4.89 | 5.31 | 46.11 |
| 1943 | 4.08 | 1.42 | 4.52 | 3.48 | 5.35 | 1.99 | 4.54 | 1.90 | 1.59 | 5.91 | 4.02 | 1.19 | 39.99 |
| 1944 | 3.05 | 2.60 | 4.70 | 4.22 | 0.72 | 5.25 | 1.85 | 2.74 | 6.61 | 2.86 | 7.52 | 3.97 | 46.09 |
| 1945 | 5.51 | 4.96 | 2.41 | 3.45 | 5.07 | 5.62 | 3.41 | 3.81 | 1.31 | 3.66 | 9.12 | 7.19 | 55.52 |
| 1946 | 5.04 | 3.84 | 1.66 | 3.01 | 6.06 | 2.66 | 3.11 | 11.79 | 3.21 | 0.39 | 1.28 | 4.56 | 46.61 |
| 1947 | 3.36 | 1.36 | 3.56 | 5.17 | 4.92 | 3.05 | 5.06 | 2.39 | 3.11 | 0.79 | 7.40 | 5.11 | 45.28 |
| 1948 | 5.75 | 2.25 | 3.48 | 3.33 | 5.86 | 5.35 | 5.68 | 1.31 | 0.91 | 4.74 | 6.61 | 1.56 | 46.83 |
| 1949 | 3.31 | 4.23 | 2.84 | 5.03 | 3.93 | 0.75 | 2.21 | 1.53 | 8.88 | 1.81 | 3.53 | 2.34 | 40.39 |
| 1950 | 4.94 | 4.16 | 4.45 | 2.35 | 1.86 | 1.23 | 1.14 | 5.79 | 2.19 | 2.92 | 7.53 | 4.24 | 42.80 |
| Av. 52 yrs. | 4.01 | 3.74 | 4.13 | 3.98 | 3.22 | 3.74 | 3.34 | 3.55 | 3.70 | 2.99 | 3.71 | 3.82 | 43.93 |

SUDBURY RIVER WATERSHED, MASS. (Metropolitan Water Supply)
Record: January, 1875, to December, 1950

| Year | Jan. | Feb. | Mar. | Apr. | May | June | July | Aug. | Sept. | Oct. | Nov. | Dec. | Annual |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1942 | 4.42 | 2.96 | 7.39 | 1.73 | 2.51 | 3.08 | 7.90 | 2.34 | 1.89 | 3.20 | 5.10 | 7.02 | 49.54 |
| 1943 | 3.37 | 1.49 | 4.05 | 3.54 | 4.80 | 2.17 | 4.71 | 1.80 | 0.85 | 5.74 | 3.95 | 1.20 | 37.67 |
| 1944 | 1.77 | 2.60 | 4.68 | 4.68 | 0.91 | 5.13 | 1.80 | 1.65 | 6.33 | 2.99 | 6.54 | 3.53 | 41.71 |
| 1945 | 3.10 | 5.12 | 2.20 | 3.04 | 5.07 | 6.22 | 2.78 | 4.23 | 1.59 | 2.25 | 7.06 | 6.50 | 49.16 |
| 1946 | 3.83 | 3.41 | 1.71 | 2.65 | 5.01 | 2.86 | 1.81 | 8.58 | 4.32 | 0.45 | 1.24 | 4.19 | 40.06 |
| 1947 | 2.91 | 2.18 | 3.26 | 4.65 | 3.89 | 3.26 | 4.82 | 1.88 | 3.45 | 1.11 | 5.44 | 4.31 | 41.16 |
| 1948 | 5.19 | 2.18 | 3.41 | 2.91 | 5.70 | 4.88 | 4.83 | 1.36 | 0.88 | 2.86 | 6.31 | 1.78 | 42.29 |
| 1949 | 3.65 | 3.24 | 1.78 | 3.80 | 4.02 | 0.71 | 1.54 | 4.69 | 2.95 | 1.57 | 2.51 | 2.24 | 32.70 |
| 1950 | 4.38 | 4.09 | 3.52 | 3.26 | 1.61 | 2.01 | 2.64 | 6.52 | 1.47 | 2.60 | 6.11 | 3.82 | 42.03 |
| Av. 76 yrs. | 3.96 | 3.82 | 4.18 | 3.65 | 3.27 | 3.40 | 3.60 | 3.78 | 3.52 | 3.36 | 3.90 | 3.75 | 44.19 |

SWAMPSCOTT, MASS.
Record: January, 1930, to December, 1950

| Year | Jan. | Feb. | Mar. | Apr. | May | June | July | Aug. | Sept. | Oct. | Nov. | Dec. | Annual |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1942 | 3.29 | 4.34 | 6.72 | 1.61 | 1.70 | 1.84 | 3.51 | 2.65 | 2.07 | 2.29 | 4.70 | 4.09 | 38.81 |
| 1943 | 3.60 | 1.18 | 4.54 | 2.72 | 5.34 | 2.07 | 2.89 | 1.93 | 1.25 | 5.15 | 2.42 | 1.08 | 34.17 |
| 1944 | 2.32 | 2.36 | 3.84 | 3.58 | 0.48 | 3.74 | 1.95 | 2.49 | 5.19 | 2.31 | 4.99 | 2.61 | 35.86 |
| 1945 | 3.65 | 4.18 | 1.78 | 2.65 | 4.61 | 6.37 | 2.68 | 3.12 | 1.68 | 2.22 | 6.85 | 7.45 | 47.24 |
| 1946 | 3.84 | 2.92 | 1.68 | 2.48 | 4.79 | 2.78 | 1.26 | 9.27 | 1.95 | 0.29 | 0.93 | 3.68 | 35.87 |
| 1947 | 2.68 | 1.33 | 2.41 | 3.92 | 3.76 | 2.33 | 3.61 | 1.63 | 3.35 | 0.70 | 5.07 | 3.38 | 34.17 |
| 1948 | 4.36 | 1.60 | 2.53 | 2.28 | 4.78 | 3.27 | 5.40 | 1.17 | 1.40* | 4.46 | 4.83 | 1.09 | 37.17 |
| 1949 | 3.25 | 2.80 | 1.52 | 2.87 | 2.92 | 0.55 | 1.82 | 2.03 | 5.99 | 1.62 | 3.76 | 1.61 | 30.74 |
| 1950 | 3.61 | 2.76 | 2.97 | 2.02 | 1.26 | 1.17 | 1.16 | 2.73 | 0.82 | 1.89 | 6.96 | 3.11 | 30.46 |
| Av. 21 yrs. | 3.86 | 2.92 | 3.66 | 3.41 | 2.98 | 3.37 | 2.99 | 3.08 | 3.31 | 2.77 | 3.66 | 3.22 | 39.23 |

*Interpolated.

SWIFT RIVER WATERSHED, MASS.
Record: January, 1916, to December, 1950

| Year | Jan. | Feb. | Mar. | Apr. | May | June | July | Aug. | Sept. | Oct. | Nov. | Dec. | Annual |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1942 | 3.67 | 1.80 | 6.70 | 0.99 | 3.04 | 4.95 | 5.03 | 2.19 | 3.85 | 3.87 | 5.70 | 5.32 | 47.11 |
| 1943 | 2.63 | 1.53 | 3.11 | 3.52 | 5.96 | 2.11 | 5.25 | 3.51 | 1.79 | 4.95 | 5.93 | 0.65 | 40.94 |
| 1944 | 1.31 | 2.07 | 4.43 | 4.13 | 1.34 | 7.97 | 3.93 | 1.75 | 6.53 | 2.10 | 4.09 | 2.72 | 42.37 |
| 1945 | 2.93 | 3.69 | 1.82 | 5.89 | 6.52 | 8.58 | 7.70 | 3.10 | 2.70 | 2.82 | 4.10 | 4.52 | 54.37 |
| 1946 | 2.83 | 3.39 | 1.71 | 2.69 | 6.37 | 5.12 | 4.55 | 4.68 | 4.56 | 1.33 | 1.14 | 3.32 | 41.69 |
| 1947 | 3.33 | 2.44 | 2.80 | 4.56 | 3.84 | 3.55 | 4.01 | 2.49 | 3.65 | 1.74 | 5.81 | 2.78 | 41.00 |
| 1948 | 2.91 | 2.19 | 3.67 | 3.46 | 6.22 | 6.59 | 4.43 | 2.34 | 2.14 | 1.30 | 6.66 | 2.79 | 44.70 |
| 1949 | 5.02 | 3.38 | 1.59 | 3.16 | 5.25 | 0.95 | 3.24 | 3.44 | 3.25 | 2.72 | 2.14 | 3.73 | 37.87 |
| 1950 | 4.88 | 3.78 | 2.58 | 3.98 | 3.32 | 4.75 | 2.96 | 3.68 | 1.60 | 2.16 | 6.60 | 4.13 | 44.42 |
| Av. 35 yrs. | 3.34 | 2.89 | 3.48 | 3.76 | 3.83 | 4.70 | 4.22 | 3.77 | 4.41 | 2.95 | 4.16 | 3.22 | 44.73 |

TAUNTON, MASS.—Elevation, 50 feet
Record: June, 1874, to December, 1950

| Year | Jan. | Feb. | Mar. | Apr. | May | June | July | Aug. | Sept. | Oct. | Nov. | Dec. | Annual |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1942 | 2.97 | 3.96 | 7.18 | 0.85 | 1.77 | 2.41 | 5.20 | 4.04 | 2.04 | 4.74 | 5.65 | 3.96 | 44.77 |
| 1943 | 3.30 | 1.82 | 3.02 | 2.99 | 4.90 | 2.03 | 4.33 | 2.95 | 1.02 | 3.38 | 3.21 | 1.07 | 34.02 |
| 1944 | 1.91 | 1.69 | 3.97 | 3.90 | 0.42 | 2.94 | 1.84 | 1.14 | 9.29 | 2.90 | 7.13 | 2.72 | 39.85 |
| 1945 | 3.55 | 4.09 | 1.92 | 1.59 | 3.88 | 3.51 | 2.29 | 2.74 | 1.61 | 2.71 | 3.39 | 7.06 | 43.44 |
| 1946 | 3.49 | 2.89 | 1.68 | 2.79 | 4.68 | 3.91 | 1.01 | 10.66 | 2.81 | 0.60 | 1.23 | 3.55 | 39.30 |
| 1947 | 2.65 | 0.84 | 2.77 | 4.08 | 5.59 | 5.44 | 5.84 | 1.45 | 2.95 | 2.05 | 4.79 | 3.30 | 41.75 |
| 1948 | 5.71 | 2.09 | 4.07 | 3.45 | 10.39 | 3.26 | 5.20 | 4.57 | 1.73 | 6.23 | 5.28 | 1.33 | 53.31 |
| 1949 | 3.41 | 2.88 | 1.12 | 3.65 | 3.83 | 0.05 | 1.95 | 2.08 | 3.19 | 1.96 | 2.85 | 1.84 | 28.81 |
| 1950 | 3.29 | 3.61 | 2.96 | 2.08 | 2.64 | 2.40 | 2.02 | 4.33 | 2.50 | 1.30 | 5.09 | 3.36 | 35.58 |
| Av. 76 yrs. | 4.33 | 3.76 | 4.09 | 3.99 | 3.48 | 3.21 | 3.75 | 3.92 | 3.64 | 3.74 | 4.11 | 3.86 | 45.88 |

TEMPLETON, MASS. (Baldwinsville)—Elevation, 930 feet
Record: January, 1907, to July, 1916 — January, 1919, to December, 1950

| Year | Jan. | Feb. | Mar. | Apr. | May | June | July | Aug. | Sept. | Oct. | Nov. | Dec. | Annual |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1942 | 3.52 | 1.17 | 6.02 | 0.87 | 3.58 | 5.92 | 4.91 | 1.68 | 3.00 | 2.66 | 5.32 | 4.16 | 42.81 |
| 1943 | 2.66 | 1.19 | 2.61 | 3.16 | 5.73 | 2.21 | 5.80 | 3.18 | 1.31 | 4.73 | 5.62 | 0.58 | 38.78 |
| 1944 | 1.04 | 1.93 | 4.05 | 3.31 | 1.13 | 8.71 | 3.88 | 0.60 | 6.84 | 1.95 | 3.34 | 2.72 | 39.50 |
| 1945 | 3.17 | 3.33 | 1.42 | 4.84 | 5.36 | 6.30 | 5.99 | 3.10 | 2.99 | 2.80 | 3.42 | 3.77 | 46.49 |
| 1946 | 2.48 | 3.05 | 1.59 | 2.40 | 5.11 | 3.97 | 3.45 | 5.85 | 5.60 | 0.69 | 1.13 | 3.73 | 39.05 |
| 1947 | 2.88 | 2.09 | 3.13 | 3.46 | 3.21 | 3.85 | 4.05 | 2.52 | 3.66 | 1.11 | 5.11 | 2.47 | 37.54 |
| 1948 | 2.47 | 2.04 | 2.89 | 3.16 | 6.68 | 4.55 | 2.40 | 1.47 | 1.37 | 1.29 | 6.29 | 2.94 | 37.55 |
| 1949 | 3.79 | 2.42 | 1.13 | 4.60 | 3.84 | 0.89 | 3.16 | 2.87 | 3.51 | 2.17 | 1.93 | 2.79 | 33.10 |
| 1950 | 4.78 | 3.03 | 1.95 | 3.23 | 2.61 | 4.89 | 2.84 | 4.32 | 1.24 | 1.36 | 7.82 | 3.42 | 41.49 |
| Av. 41 yrs. | 3.15 | 2.70 | 3.42 | 3.54 | 3.34 | 3.80 | 3.83 | 3.62 | 3.77 | 2.74 | 3.93 | 3.23 | 41.07 |

TISBURY, MASS.
Record: 1929 to December, 1950

| Year | Jan. | Feb. | Mar. | Apr. | May | June | July | Aug. | Sept. | Oct. | Nov. | Dec. | Annual |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1942 | 3.69 | 3.45 | 7.90 | 0.88 | 1.98 | 2.74 | 3.07 | 6.86 | 3.66 | 4.20 | 4.79 | 4.27 | 47.49 |
| 1943 | 4.39 | 2.63 | 3.83 | 3.66 | 3.31 | 0.81 | 5.45 | 4.35 | 2.64 | 3.27 | 3.14 | 1.61 | 39.09 |
| 1944 | 3.28 | 1.98 | 6.08 | 5.72 | 1.75 | 1.60 | 0.75 | 1.28 | 4.15 | 2.57 | 9.33 | 3.30 | 41.79 |
| 1945 | 3.79 | 3.95 | 2.31 | 1.94 | 4.11 | 4.03 | 1.81 | 2.01 | 1.20 | 2.59 | 9.81 | 6.60 | 44.15 |
| 1946 | 3.56 | 3.58 | 1.59 | 3.68 | 5.30 | 3.24 | 2.42 | 10.79 | 1.55 | 0.51 | 0.96 | 4.23 | 41.41 |
| 1947 | 3.36 | 1.59 | 2.86 | 7.44 | 4.15 | 4.41 | 3.24 | 1.49 | 2.25 | 2.14 | 3.24 | 5.01 | 41.18 |
| 1948 | 5.25 | 2.80 | 3.67 | 4.27 | 8.09 | 2.23 | 1.93 | 0.96 | 2.81 | 6.15 | 5.71 | 2.25 | 46.12 |
| 1949 | 4.17 | 4.77 | 2.33 | 5.55 | 3.90 | 0.17 | 1.29 | 2.63 | 3.21 | 0.75 | 4.36 | 3.82 | 36.95 |
| 1950 | 2.96 | 3.82 | 2.33 | 3.46 | 2.47 | 3.67 | 1.11 | 4.04 | 2.62 | 1.19 | 7.17 | 4.19 | 39.03 |
| Av. 18 yrs. | 3.96 | 3.13 | 4.22 | 4.20 | 3.36 | 3.34 | 2.66 | 3.74 | 4.39 | 3.24 | 4.40 | 3.72 | 44.36 |

UXBRIDGE, MASS.
Record: January, 1931, to December, 1950

| Year | Jan. | Feb. | Mar. | Apr. | May | June | July | Aug. | Sept. | Oct. | Nov. | Dec. | Annual |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1942 | 4.94 | 3.07 | 8.26 | 1.10 | 2.56 | 3.50 | 4.83 | 3.23 | 1.66 | 3.35 | 5.61 | 8.08 | 50.19 |
| 1943 | 3.77 | 1.80 | 4.70 | 4.22 | 4.75 | 3.16 | 7.24 | 0.48 | 0.99 | 5.54 | 3.39 | 1.14 | 41.18 |
| 1944 | 1.61 | 2.47 | 4.80 | 4.61 | 1.07 | 4.48 | 1.51 | 1.84 | 9.95 | 2.60 | 6.08 | 3.95 | 44.97 |
| 1945 | 3.35 | 5.04 | 2.50 | 3.24 | 5.16 | 7.53 | 4.35 | 3.65 | 1.69 | 2.30 | 7.80 | 5.46 | 52.07 |
| 1946 | 3.72 | 3.55 | 1.38 | 2.35 | 5.58 | 4.60 | 1.59 | 7.97 | 4.30 | 0.39 | 1.06 | 3.95 | 40.44 |
| 1947 | 2.73 | 2.14 | 3.70 | 4.00 | 3.73 | 4.40 | 5.45 | 1.67 | 3.62 | 1.54 | 4.61 | 3.37 | 40.96 |
| 1948 | 5.35 | 1.91 | 4.01 | 3.39 | 6.14 | 4.24 | 4.94 | 1.30 | 0.85 | 2.84 | 6.06 | 2.64 | 43.67 |
| 1949 | 3.90 | 3.28 | 2.09 | 3.85 | 4.26 | 0.45 | 1.42 | 5.83 | 2.96 | 1.64 | 2.69 | 2.21 | 34.58 |
| 1950 | 3.83 | 4.60 | 3.80 | 3.74 | 2.41 | 2.02 | 2.89 | 4.21 | 1.27 | 2.58 | 6.36 | 4.20 | 41.91 |
| Av. 20 yrs. | 4.00 | 3.27 | 4.33 | 3.66 | 3.29 | 4.04 | 3.68 | 3.96 | 3.89 | 2.71 | 4.15 | 3.66 | 44.64 |

WAKEFIELD, MASS. (Water Works Pumping Station, Crystal Lake)—Elevation, 92 feet
Record: January, 1928, to December, 1950

| Year | Jan. | Feb. | Mar. | Apr. | May | June | July | Aug. | Sept. | Oct. | Nov. | Dec. | Annual |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1942 | 3.43 | 3.44 | 4.84 | 2.06 | 1.69 | 3.87 | 3.05 | 3.05 | 1.98 | 2.83 | 3.70 | 4.58 | 38.52 |
| 1943 | 3.52 | 1.24 | 3.20 | 2.59 | 4.53 | 1.54 | 3.59 | 1.48 | 1.42 | 3.73 | 3.48 | 0.96 | 31.28 |
| 1944 | 2.50 | 1.80 | 3.46 | 3.78 | 0.67 | 4.99 | 2.30 | 3.22 | 5.64 | 2.53 | 5.76 | 2.63 | 39.28 |
| 1945 | 2.44 | 3.74 | 1.81 | 2.80 | 3.97 | 6.45 | 2.43 | 3.38 | 1.13 | 2.62 | 6.50 | 4.89 | 42.16 |
| 1946 | 3.49 | 3.18 | 1.30 | 2.37 | 4.79 | 2.80 | 1.98 | 9.04 | 3.10 | 0.42 | 1.27 | 3.85 | 37.59 |
| 1947 | 2.79 | 1.48 | 2.75 | 4.27 | 4.14 | 2.52 | 4.69 | 2.81 | 2.57 | 0.52 | 5.39 | 3.29 | 37.22 |
| 1948 | 5.79 | 2.40 | 3.61 | 2.47 | 4.66 | 4.55 | 5.37 | 0.94 | 0.93 | 2.54 | 5.18 | 1.59 | 40.03 |
| 1949 | 3.07 | 3.08 | 1.78 | 3.80 | 3.18 | 0.65 | 1.72 | 4.22 | 3.82 | 1.76 | 2.67 | 1.73 | 31.48 |
| 1950 | 4.27 | 2.96 | 4.04 | 1.99 | 1.54 | 1.20 | 1.56 | 4.62 | 1.95 | 2.34 | 5.21 | 3.69 | 35.37 |
| Av. 23 yrs. | 3.44 | 2.71 | 3.54 | 3.52 | 2.92 | 3.60 | 2.93 | 3.38 | 3.57 | 2.83 | 3.26 | 3.16 | 38.86 |

WALPOLE, MASS. (East Walpole) (Bird & Son)—Elevation, 90 feet
Record: January, 1902, to December, 1950

| Year | Jan. | Feb. | Mar. | Apr. | May | June | July | Aug. | Sept. | Oct. | Nov. | Dec. | Annual |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1942 | 3.90 | 2.96 | 7.63 | 1.28 | 1.87 | 2.59 | 4.71 | 2.73 | 2.40 | 3.39 | 5.65 | 4.92 | 44.03 |
| 1943 | 3.31 | 1.16 | 3.27 | 3.76 | 5.47 | 1.53 | 4.36 | 1.46 | 1.23 | 4.71 | 2.82 | 1.05 | 34.13 |
| 1944 | 1.93 | 2.23 | 4.36 | 3.94 | 0.25 | 3.97 | 2.52 | 1.41 | 8.13 | 3.10 | 6.50 | 2.78 | 41.12 |
| 1945 | 3.51 | 4.83 | 2.28 | 2.69 | 4.32 | 6.10 | 3.03 | 3.67 | 1.49 | 2.57 | 9.22 | 7.36 | 51.07 |
| 1946 | 3.62 | 3.08 | 1.29 | 2.37 | 5.77 | 4.48 | 1.37 | 10.74 | 2.51 | 0.18 | 1.10 | 3.83 | 40.34 |
| 1947 | 2.72 | 1.37 | 2.87 | 4.82 | 4.97 | 4.60 | 4.01 | 1.91 | 5.10 | 1.45 | 5.80 | 4.61 | 44.23 |
| 1948 | 5.78 | 2.33 | 3.34 | 3.42 | 5.95 | 4.10 | 5.05 | 1.15 | 1.15 | 6.18 | 6.47 | 1.50 | 46.42 |
| 1949 | 3.14 | 3.51 | 1.58 | 4.59 | 3.70 | 0.32 | 0.72 | 4.57 | 3.65 | 2.26 | 3.91 | 1.84 | 33.79 |
| 1950 | 3.56 | 4.13 | 3.35 | 3.63 | 1.76 | 1.77 | 2.49 | 4.87 | 2.99 | 1.77 | 7.85 | 3.71 | 41.88 |
| Av. 49 yrs. | 3.59 | 3.12 | 3.56 | 3.79 | 3.11 | 3.39 | 3.59 | 3.60 | 3.45 | 3.11 | 3.54 | 3.54 | 41.39 |

WALTHAM, MASS. (Water Works Pumping Station)—Elevation, 20 feet
Record: January, 1880, to December, 1950

| Year | Jan. | Feb. | Mar. | Apr. | May | June | July | Aug. | Sept. | Oct. | Nov. | Dec. | Annual |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1942 | 4.07 | 2.04 | 6.77 | 1.45 | 2.13 | 4.04 | 4.96 | 2.79 | 1.98 | 3.21 | 5.13 | 4.56 | 43.13 |
| 1943 | 2.56 | 1.06 | 3.49 | 3.40 | 4.47 | 2.70 | 3.82 | 0.86 | 1.07 | 4.06 | 3.40 | 1.01 | 31.90 |
| 1944 | 2.01 | 1.97 | 3.67 | 3.90 | 0.61 | 4.13 | 1.81 | 1.87 | 5.35 | 2.81 | 5.14 | 2.92 | 36.19 |
| 1945 | 2.33 | 2.92 | 1.95 | 2.67 | 4.69 | 6.62 | 2.72 | 3.81 | 1.23 | 3.02 | 6.71 | 4.87 | 43.54 |
| 1946 | 3.91 | 2.96 | 1.58 | 2.64 | 5.09 | 2.91 | 2.13 | 9.82 | 2.70 | 0.66 | 1.17 | 3.43 | 39.00 |
| 1947 | 2.59 | 0.95 | 3.25 | 4.19 | 3.69 | 3.13 | 5.05 | 0.93 | 3.96 | 0.98 | 6.66 | 3.05 | 38.43 |
| 1948 | 3.85 | 1.72 | 2.40 | 1.77 | 5.11 | 4.59 | 4.95 | 1.31 | 0.94 | 2.76 | 5.79 | 1.34 | 36.53 |
| 1949 | 3.38 | 3.03 | 1.15 | 4.58 | 3.29 | 0.87 | 1.65 | 5.18 | 3.85 | 1.49 | 2.35 | 1.87 | 32.69 |
| 1950 | 3.74 | 3.17 | 3.18 | 2.68 | 1.58 | 1.30 | 2.23 | 5.57 | 1.24 | 2.37 | 5.15 | 3.20 | 35.41 |
| Av. 71 yrs. | 3.50 | 3.25 | 3.48 | 3.47 | 3.22 | 3.42 | 3.62 | 3.65 | 3.58 | 3.31 | 3.58 | 3.35 | 41.43 |

WARE, MASS. (Ware Center)—Elevation, 520 feet
Record: October, 1919, to December, 1950

| Year | Jan. | Feb. | Mar. | Apr. | May | June | July | Aug. | Sept. | Oct. | Nov. | Dec. | Annual |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1942 | 3.53 | 1.70 | 5.30 | 1.07 | 3.41 | 4.09 | 4.78 | 2.75 | 3.48 | 3.56 | 5.12 | 4.79 | 43.58 |
| 1943 | 2.54 | 1.87 | 4.27 | 3.17 | 6.27 | 2.69 | 6.18 | 3.39 | 1.24 | 3.90 | 4.93 | 0.74 | 41.19 |
| 1944 | 1.27 | 1.89 | 4.17 | 4.36 | 0.70 | 7.95 | 1.43 | 1.97 | 6.77 | 1.92 | 3.50 | 3.88 | 39.81 |
| 1945 | 3.16 | 2.85 | 1.59 | 5.16 | 6.01 | 8.29 | 7.19 | 4.36 | 2.00 | 2.29 | 4.72 | 4.92 | 52.54 |
| 1946 | 2.64 | 3.24 | 2.09 | 2.65 | 3.08 | 6.06 | 4.25 | 4.37 | 4.34 | 0.95 | 1.34 | 2.70 | 37.71 |
| 1947 | 2.96 | 3.07 | 2.02 | 5.42 | 2.91 | 3.40 | 5.06 | 2.41 | 2.59 | 1.51 | 4.60 | 2.93 | 38.88 |
| 1948 | 2.71 | 2.09 | 3.86 | 2.56 | 6.26 | 6.85 | 4.38 | 1.96 | 1.70 | 1.45 | 5.76 | 2.83 | 42.41 |
| 1949 | 4.40 | 3.20 | 1.19 | 3.43 | 5.95 | 1.22 | 4.19 | 3.28 | 1.96 | 2.58 | 2.17 | 3.70 | 37.27 |
| 1950 | 4.08 | 3.93 | 2.47 | 2.82 | 2.91 | 4.16 | 2.90 | 4.12 | 0.94 | 1.98 | 5.76 | 3.65 | 39.72 |
| Av. 31 yrs. | 3.14 | 2.73 | 3.00 | 3.38 | 3.55 | 4.82 | 4.30 | 3.63 | 3.97 | 2.61 | 3.71 | 3.12 | 41.96 |

WARE RIVER WATERSHED, MASS. (Above Coldbrook)
Record: January, 1924, to December, 1950

| Year | Jan. | Feb. | Mar. | Apr. | May | June | July | Aug. | Sept. | Oct. | Nov. | Dec. | Annual |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1942 | 3.53 | 2.23 | 6.05 | 0.99 | 4.06 | 4.88 | 5.70 | 1.95 | 3.07 | 3.51 | 4.51 | 4.19 | 44.67 |
| 1943 | 3.05 | 1.51 | 2.93 | 3.51 | 5.04 | 1.83 | 4.42 | 2.77 | 0.97 | 5.39 | 5.86 | 0.60 | 37.88 |
| 1944 | 1.24 | 2.37 | 4.28 | 3.99 | 1.32 | 9.15 | 2.10 | 1.05 | 7.63 | 1.66 | 3.49 | 3.07 | 41.35 |
| 1945 | 3.02 | 4.21 | 1.84 | 4.96 | 5.39 | 6.51 | 5.59 | 3.77 | 1.64 | 2.49 | 4.03 | 4.06 | 47.51 |
| 1946 | 2.83 | 3.28 | 1.76 | 2.84 | 5.39 | 4.42 | 4.22 | 4.71 | 7.12 | 0.96 | 1.31 | 2.99 | 41.33 |
| 1947 | 2.86 | 2.30 | 2.90 | 4.44 | 2.91 | 3.02 | 5.35 | 1.39 | 2.81 | 0.86 | 6.01 | 3.04 | 37.89 |
| 1948 | 3.50 | 2.40 | 3.49 | 3.33 | 6.78 | 6.18 | 5.57 | 2.19 | 1.57 | 1.83 | 6.83 | 2.84 | 46.51 |
| 1949 | 4.32 | 3.16 | 1.58 | 3.36 | 4.42 | 0.67 | 2.57 | 3.97 | 2.66 | 2.47 | 1.93 | 3.15 | 34.26 |
| 1950 | 4.33 | 3.00 | 2.65 | 3.56 | 3.50 | 3.42 | 3.29 | 3.12 | 1.43 | 1.88 | 6.98 | 3.31 | 40.47 |
| Av. 27 yrs. | 3.30 | 2.79 | 3.40 | 3.48 | 3.69 | 4.14 | 4.17 | 3.49 | 4.30 | 2.91 | 3.88 | 3.07 | 42.62 |

WAREHAM, MASS. (Onset Water Co.)—Elevation, 60 feet
Record: September, 1917, to December, 1950

| Year | Jan. | Feb. | Mar. | Apr. | May | June | July | Aug. | Sept. | Oct. | Nov. | Dec. | Annual |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1942 | 6.10 | 3.00 | 8.54 | 1.15 | 2.29 | 2.53 | 2.86 | 6.90 | 3.94 | 4.13 | 6.01 | 4.31 | 51.76 |
| 1943 | 5.10 | 2.73 | 4.37 | 3.09 | 4.35 | 1.55 | 3.86 | 2.68 | 3.51 | 3.83 | 3.10 | 1.25 | 39.42 |
| 1944 | 3.59 | 2.71 | 5.22 | 4.72 | 0.56 | 3.45 | 0.65 | 1.44 | 4.50 | 1.94 | 9.56 | 4.40 | 42.74 |
| 1945 | 4.23 | 4.80 | 2.91 | 1.66 | 4.11 | 5.39 | 3.49 | 3.14 | 1.35 | 4.36 | 11.87 | 7.15 | 54.46 |
| 1946 | 4.08 | 3.60 | 1.73 | 3.40 | 5.19 | 4.30 | 3.11 | 13.12 | 2.03 | 0.44 | 0.93 | 4.18 | 46.11 |
| 1947 | 2.84 | 2.59 | 3.05 | 6.25 | 3.50 | 3.93 | 2.78 | 1.30 | 2.06 | 3.33 | 3.04 | 4.12 | 38.79 |
| 1948 | 7.19 | 3.84 | 4.34 | 5.22 | 10.22 | 3.59 | 2.81 | 1.09 | 2.04 | 7.64 | 5.71 | 2.90 | 56.59 |
| 1949 | 4.29 | 4.85 | 4.53 | 4.89 | 3.43 | T | 2.02 | 2.52 | 3.11 | 1.05 | 3.50 | 3.16 | 37.35 |
| 1950 | 3.86 | 4.81 | 4.34 | 3.49 | 5.64 | 3.06 | 1.07 | 2.79 | 2.42 | 1.38 | 6.66 | 3.88 | 43.40 |
| Av. 33 yrs. | 4.28 | 3.78 | 4.42 | 4.07 | 3.48 | 3.76 | 3.16 | 4.01 | 3.77 | 3.24 | 4.23 | 3.90 | 46.10 |

WAREHAM, MASS. (East Wareham) (U.S. Weather Bureau)
Record: January, 1927, to December, 1950

| Year | Jan. | Feb. | Mar. | Apr. | May | June | July | Aug. | Sept. | Oct. | Nov. | Dec. | Annual |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1942 | 4.35 | 3.69 | 8.45 | 1.04 | 1.79 | 2.14 | 3.34 | 6.94 | 3.55 | 4.12 | 6.13 | 4.11 | 49.65 |
| 1943 | 3.50 | 2.41 | 3.83 | 2.31 | 4.45 | 1.38 | 3.55 | 2.70 | 2.29 | 4.08 | 3.17 | 1.37 | 35.04 |
| 1944 | 3.49 | 2.21 | 4.94 | 4.61 | 0.47 | 3.31 | 0.67 | 1.45 | 4.29 | 2.11 | 9.92 | 3.87 | 41.34 |
| 1945 | 4.28 | 4.76 | 2.79 | 1.84 | 3.71 | 5.17 | 2.77 | 3.27 | 1.38 | 4.68 | 10.61 | 8.11 | 53.37 |
| 1946 | 4.32 | 2.80 | 2.02 | 3.27 | 4.73 | 3.61 | 3.00 | 12.61 | 1.10 | 1.24 | 0.88 | 4.34 | 43.92 |
| 1947 | 2.95 | 1.04 | 2.67 | 5.40 | 5.22 | 3.52 | 2.59 | 1.11 | 1.99 | 3.46 | 3.41 | 4.16 | 37.52 |
| 1948 | 6.67 | 3.61 | 4.71 | 4.63 | 9.18 | 4.18 | 2.79 | 0.74 | 1.13 | 7.04 | 5.36 | 2.54 | 52.58 |
| 1949 | 3.64 | 5.33 | 3.88 | 4.92 | 3.02 | 0.00 | 1.97 | 2.34 | 3.37 | 0.84 | 3.47 | 2.33 | 35.61 |
| 1950 | 3.64 | 4.54 | 4.32 | 3.46 | 5.24 | 2.34 | 1.22 | 3.44 | 2.21 | 0.98 | 6.91 | 4.25 | 42.55 |
| Av. 24 yrs. | 4.17 | 3.16 | 4.27 | 3.97 | 3.32 | 3.61 | 2.88 | 3.78 | 3.98 | 3.38 | 4.41 | 4.05 | 44.98 |

WARREN, MASS.—Elevation, 650 feet
Record: 1911 to December, 1950

| Year | Jan. | Feb. | Mar. | Apr. | May | June | July | Aug. | Sept. | Oct. | Nov. | Dec. | Annual |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1942 | 3.59 | 1.81 | 6.65 | 1.09 | 4.23 | 4.61 | 4.84 | 2.24 | 3.23 | 4.10 | 4.74 | 4.65 | 45.78 |
| 1943 | 2.61 | 1.69 | 3.32 | 3.22 | 6.57 | 2.75 | 5.85 | 1.43 | 0.96 | 5.72 | 5.03 | 0.86 | 40.01 |
| 1944 | 1.55 | 2.26 | 4.57 | 4.25 | 0.96 | 7.16 | 1.67 | 2.88 | 6.79 | 1.90 | 4.35 | 2.87 | 41.01 |
| 1945 | 2.98 | 3.30 | 2.27 | 4.90 | 5.05 | 5.59 | 7.18 | 3.86 | 1.80 | 2.55 | 3.59 | 5.37 | 48.44 |
| 1946 | 3.50 | 3.05 | 1.58 | 2.29 | 4.88 | 3.70 | 5.07 | 6.04 | 4.29 | 0.74 | 1.67 | 3.32 | 40.13 |
| 1947 | 3.24 | 2.39 | 2.36 | 5.67 | 2.40 | 2.88 | 4.81 | 1.14 | 3.32 | 1.35 | 5.55 | 2.28 | 37.39 |
| 1948 | 2.99 | 2.05 | 3.60 | 3.08 | 6.59 | 7.39 | 5.84 | 2.52 | 0.69 | 1.89 | 5.91 | 2.61 | 45.16 |
| 1949 | 3.88 | 2.76 | 1.57 | 3.26 | 3.27 | 0.73 | 3.14 | 3.07 | 1.75 | 1.90 | 2.39 | 3.58 | 31.30 |
| 1950 | 4.45 | 3.44 | 2.98 | 3.33 | 3.11 | 3.35 | 4.47 | 3.94 | 2.23 | 2.17 | 5.61 | 4.23 | 43.31 |
| Av. 34 yrs. | 3.18 | 2.82 | 3.53 | 3.36 | 3.40 | 4.03 | 4.26 | 3.62 | 3.87 | 2.62 | 3.48 | 2.91 | 41.08 |

WARWICK, MASS.—Elevation, 1,000 feet
Record: July, 1920, to December, 1950

| Year | Jan. | Feb. | Mar. | Apr. | May | June | July | Aug. | Sept. | Oct. | Nov. | Dec. | Annual |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1942 | 3.00 | 1.45 | 6.22 | 1.49 | 3.73 | 5.19 | 6.57 | 2.31 | 4.10 | 3.88 | 5.47 | 5.23 | 48.64 |
| 1943 | 2.36 | 1.84 | 3.11 | 3.69 | 6.63 | 2.37 | 3.68 | 3.51 | 3.54 | 6.25 | 6.10 | 0.55 | 43.63 |
| 1944 | 1.43 | 2.29 | 4.16 | 3.43 | 1.09 | 7.03 | 6.46 | 1.27 | 7.95 | 2.60 | 3.71 | 2.35 | 43.77 |
| 1945 | 3.40 | 3.64 | 1.98 | 7.16 | 8.05 | 7.48 | 8.19 | 3.38 | 3.23 | 3.68 | 4.49 | 4.43 | 59.11 |
| 1946 | 3.12 | 3.43 | 1.44 | 2.70 | 7.09 | 3.59 | 5.08 | 5.89 | 4.98 | 1.54 | 1.16 | 3.82 | 43.84 |
| 1947 | 3.69 | 3.15 | 3.12 | 4.32 | 4.38 | 4.74 | 2.83 | 2.47 | 3.98 | 1.95 | 6.13 | 3.14 | 43.90 |
| 1948 | 2.99 | 2.48 | 3.26 | 3.27 | 8.17 | 7.08 | 3.22 | 2.88 | 0.94 | 1.80 | 5.57 | 2.44 | 44.10 |
| 1949 | 4.10 | 3.08 | 1.94 | 4.53 | 4.05 | 1.67 | 2.29 | 3.10 | 3.30 | 2.99 | 1.85 | 3.18 | 36.08 |
| 1950 | 5.05 | 3.57 | 2.72 | 4.02 | 3.35 | 4.11 | 2.66 | 5.31 | 1.34 | 2.56 | 5.94 | 4.39 | 45.02 |
| Av. 30 yrs. | 3.29 | 2.75 | 3.66 | 3.96 | 4.17 | 4.72 | 4.47 | 3.91 | 4.30 | 3.30 | 4.16 | 3.29 | 45.98 |

WEBSTER, MASS. (Slater & Sons Mill)—Elevation, 450 feet
Record: January, 1880, to December, 1950

| Year | Jan. | Feb. | Mar. | Apr. | May | June | July | Aug. | Sept. | Oct. | Nov. | Dec. | Annual |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1942 | 3.43 | 1.70 | 7.58 | 0.74 | 2.23 | 2.89 | 4.23 | 2.46 | 1.74 | 4.04 | 4.29 | 4.51 | 39.84 |
| 1943 | 2.58 | 1.50 | 3.45 | 3.53 | 4.43 | 1.88 | 4.49 | 1.02 | 0.43 | 4.99 | 4.78 | 1.03 | 34.11 |
| 1944 | 1.10 | 2.39 | 4.75 | 4.80 | 1.15 | 4.86 | 2.02 | 1.06 | 8.68 | 1.69 | 5.63 | 3.12 | 41.25 |
| 1945 | 2.72 | 3.40 | 1.62 | 4.18 | 5.63 | 5.32 | 2.48 | 2.43 | 1.07 | 2.32 | 4.31 | 4.22 | 39.70 |
| 1946 | 3.37 | 3.35 | 1.56 | 2.20 | 5.41 | 4.19 | 2.02 | 9.16 | 3.01 | 0.41 | 1.34 | 4.43 | 40.45 |
| 1947 | 2.76 | 2.71 | 3.04 | 4.39 | 3.12 | 4.42 | 5.36 | 3.22 | 2.30 | 1.74 | 4.54 | 3.14 | 40.74 |
| 1948 | 3.83 | 1.86 | 4.02 | 3.22 | 5.61 | 4.67 | 5.64 | 2.07 | 1.16 | 2.49 | 5.86 | 2.89 | 43.32 |
| 1949 | 4.06 | 3.06 | 1.78 | 2.65 | 4.12 | 0.31 | 1.28 | 3.58 | 2.57 | 1.69 | 2.75 | 2.54 | 30.39 |
| 1950 | 3.95 | 3.95 | 2.81 | 3.93 | 3.19 | 2.98 | 2.34 | 5.44 | 1.24 | 1.56 | 6.24 | 3.33 | 40.96 |
| Av. 71 yrs. | 3.56 | 3.47 | 3.88 | 3.36 | 3.24 | 3.45 | 3.61 | 3.78 | 3.58 | 3.08 | 3.47 | 3.55 | 42.03 |

WENDELL, MASS.—Elevation, 1,200 feet
Record: October, 1919, to December, 1950

| Year | Jan. | Feb. | Mar. | Apr. | May | June | July | Aug. | Sept. | Oct. | Nov. | Dec. | Annual |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1942 | 3.83 | 1.99 | 7.47 | 1.31 | 2.62 | 4.45 | 5.41 | 2.21 | 4.02 | 4.06 | 5.34 | 5.95 | 48.66 |
| 1943 | 2.79 | 1.59 | 3.93 | 3.54 | 6.67 | 2.14 | 4.65 | 2.39 | 2.54 | 4.22 | 6.25 | 0.61 | 41.32 |
| 1944 | 1.54 | 2.63 | 4.99 | 3.75 | 1.51 | 6.73 | 5.97 | 1.38 | 6.65 | 2.13 | 4.21 | 2.79 | 44.28 |
| 1945 | 3.70 | 4.32 | 2.12 | 6.27 | 7.14 | 6.64 | 9.34 | 2.55 | 3.78 | 2.72 | 4.23 | 5.60 | 58.41 |
| 1946 | 3.26 | 4.04 | 1.42 | 2.83 | 7.00 | 4.22 | 6.02 | 4.53 | 4.71 | 1.72 | 0.96 | 4.12 | 44.83 |
| 1947 | 3.70 | 3.32 | 3.11 | 4.37 | 3.77 | 4.38 | 2.69 | 3.32 | 4.56 | 1.63 | 6.18 | 3.29 | 44.32 |
| 1948 | 3.17 | 2.90 | 3.95 | 3.37 | 6.46 | 6.66 | 6.16 | 2.19 | 2.66 | 1.28 | 5.69 | 3.34 | 47.83 |
| 1949 | 5.29 | 3.56 | 2.19 | 4.05 | 4.39 | 0.40 | 2.71 | 4.21 | 3.33 | 2.79 | 1.70 | 3.79 | 38.41 |
| 1950 | 5.68 | 4.37 | 3.58 | 4.08 | 3.44 | 5.17 | 2.21 | 3.86 | 1.48 | 2.87 | 5.68 | 3.65 | 46.07 |
| Av. 31 yrs. | 3.52 | 2.93 | 3.60 | 4.16 | 4.08 | 4.77 | 4.26 | 3.77 | 4.60 | 3.18 | 4.30 | 3.41 | 46.58 |

WEST BOYLSTON, MASS. (Louis C. Campbell)
Record: December, 1944, to December, 1950

| Year | Jan. | Feb. | Mar. | Apr. | May | June | July | Aug. | Sept. | Oct. | Nov. | Dec. | Annual |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1944 | — | — | — | — | — | — | — | — | — | — | — | 2.40 | — |
| 1945 | 2.99 | 4.64 | 1.62 | 4.69 | 5.63 | 6.19 | 4.55 | 5.72 | 2.03 | 1.97 | 4.09 | 4.46 | 48.58 |
| 1946 | 3.05 | 2.90 | 1.46 | 2.94 | 6.42 | 2.98 | 4.11 | 7.95 | 5.40 | 0.92 | 1.52 | 3.45 | 43.10 |
| 1947 | 3.24 | 2.08 | 3.29 | 5.07 | 3.30 | 3.00 | 4.44 | 3.30 | 3.37 | 1.22 | 5.46 | 2.73 | 40.50 |
| 1948 | 3.40 | 2.69 | 3.40 | 3.52 | 7.70 | 6.20 | 4.82 | 1.61 | 0.95 | 2.78 | 6.83 | 1.74 | 45.64 |
| 1949 | 2.98 | 2.01 | 1.36 | 4.69 | 3.64 | 0.58 | 1.28 | 2.11 | 2.43 | 1.35 | 1.33 | 2.53 | 26.29 |
| 1950 | 3.56 | 4.33 | 2.98 | 5.19 | 2.97 | 2.55 | 3.08 | 3.41 | 1.64 | 3.03 | 4.65 | 3.68 | 41.07 |
| Av. 6 yrs. | 3.20 | 3.11 | 2.35 | 4.35 | 4.94 | 3.58 | 3.71 | 4.02 | 2.64 | 1.88 | 3.98 | 3.10 | 40.86 |

WEST BROOKFIELD, MASS.—Elevation, 630 feet
Record: January, 1913, to December, 1950

| Year | Jan. | Feb. | Mar. | Apr. | May | June | July | Aug. | Sept. | Oct. | Nov. | Dec. | Annual |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1942 | 3.45 | 1.33 | 6.08 | 0.68 | 3.25 | 3.97 | 4.13 | 2.82 | 2.76 | 3.42 | 4.88 | 4.77 | 41.54 |
| 1943 | 2.36 | 0.98 | 2.82 | 3.04 | 6.07 | 3.10 | 6.02 | 1.54 | 0.73 | 6.25 | 4.58 | 0.80 | 38.29 |
| 1944 | 1.50 | 2.21 | 4.57 | 3.85 | 1.81 | 6.55 | 1.95 | 1.78 | 5.65 | 1.79 | 3.31 | 2.78 | 37.75 |
| 1945 | 3.18 | 3.62 | 1.63 | 5.31 | 4.69 | 6.21 | 6.28 | 3.19 | 2.17 | 2.48 | 4.04 | 4.87 | 47.67 |
| 1946 | 3.28 | 2.83 | 1.42 | 1.94 | 3.14 | 4.40 | 4.15 | 5.40 | 4.49 | 0.65 | 1.45 | 2.87 | 36.02 |
| 1947 | 3.61 | 2.04 | 2.18 | 5.73 | 2.67 | 2.45 | 3.96 | 1.20 | 3.12 | 1.82 | 4.78 | 2.31 | 35.87 |
| 1948 | 1.59 | 2.06 | 3.00 | 3.86 | 5.93 | 7.99 | 5.95 | 2.97 | 1.18 | 1.60 | 6.07 | 1.85 | 44.05 |
| 1949 | 3.36 | 2.51 | 0.98 | 2.80 | 3.47 | 0.66 | 2.64 | 3.40 | 2.09 | 1.87 | 2.09 | 3.47 | 29.34 |
| 1950 | 4.17 | 3.96 | 3.40 | 2.96 | 2.56 | 3.38 | 3.93 | 3.83 | 1.29 | 2.44 | 4.28 | 3.78 | 39.98 |
| Av. 38 yrs. | 2.88 | 2.75 | 3.36 | 3.28 | 3.28 | 3.84 | 4.22 | 3.60 | 3.87 | 2.78 | 3.39 | 2.83 | 40.08 |

WESTFIELD, MASS. (West Parish Filters, Springfield Water Works)—Elevation, 475 feet
Record: January, 1906, to December, 1950

| Year | Jan. | Feb. | Mar. | Apr. | May | June | July | Aug. | Sept. | Oct. | Nov. | Dec. | Annual |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1942 | 4.15 | 2.52 | 7.20 | 1.19 | 5.11 | 3.89 | 6.98 | 2.24 | 5.39 | 5.15 | 6.56 | 7.11 | 57.49 |
| 1943 | 4.19 | 1.99 | 3.41 | 3.83 | 7.13 | 3.70 | 6.00 | 1.44 | 2.59 | 7.25 | 4.64 | 0.77 | 46.94 |
| 1944 | 1.64 | 2.88 | 5.48 | 4.49 | 1.30 | 4.40 | 1.84 | 1.97 | 7.59 | 2.52 | 6.24 | 4.57 | 44.92 |
| 1945 | 4.18 | 4.86 | 2.48 | 5.44 | 7.50 | 5.70 | 7.94 | 4.92 | 3.47 | 2.63 | 5.43 | 4.90 | 59.45 |
| 1946 | 2.86 | 3.97 | 1.75 | 2.49 | 7.17 | 2.82 | 5.64 | 2.71 | 4.90 | 1.49 | 0.92 | 3.35 | 40.07 |
| 1947 | 3.70 | 3.52 | 3.96 | 4.97 | 5.78 | 3.40 | 4.69 | 3.49 | 3.26 | 4.15 | 6.97 | 3.33 | 51.22 |
| 1948 | 3.76 | 2.45 | 4.27 | 3.40 | 5.69 | 6.63 | 1.96 | 3.39 | 1.37 | 2.28 | 4.92 | 9.69 | 50.31 |
| 1949 | 5.90 | 3.98 | 1.73 | 4.63 | 4.57 | 0.55 | 2.94 | 3.22 | 3.67 | 2.69 | 2.17 | 3.16 | 39.21 |
| 1950 | 5.12 | 5.08 | 4.13 | 3.45 | 4.54 | 5.19 | 2.18 | 4.27 | 1.31 | 3.30 | 7.33 | 5.89 | 51.79 |
| Av. 45 yrs. | 3.85 | 3.74 | 4.00 | 3.99 | 4.24 | 4.14 | 3.90 | 4.02 | 4.13 | 3.67 | 4.34 | 3.97 | 47.99 |

WESTFIELD, MASS.—Elevation, 150 feet
Record: January, 1918, to December, 1950

| Year | Jan. | Feb. | Mar. | Apr. | May | June | July | Aug. | Sept. | Oct. | Nov. | Dec. | Annual |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1942 | 4.12 | 2.51 | 6.53 | 0.89 | 4.40 | 5.03 | 5.47 | 1.81 | 4.75 | 4.79 | 5.73 | 7.03 | 53.06 |
| 1943 | 3.82 | 1.67 | 5.11 | 3.39 | 5.26 | 3.74 | 5.52 | 1.15 | 1.38 | 6.53 | 5.06 | 0.69 | 43.32 |
| 1944 | 1.70 | 2.59 | 5.29 | 4.15 | 0.94 | 4.29 | 2.54 | 1.00 | 7.06 | 1.92 | 5.89 | 4.11 | 41.43 |
| 1945 | 3.80 | 4.35 | 2.31 | 5.33 | 6.83 | 7.47 | 7.30 | 4.72 | 2.82 | 2.63 | 4.89 | 4.99 | 57.44 |
| 1946 | 2.86 | 3.40 | 1.67 | 2.26 | 6.72 | 3.19 | 7.42 | 3.93 | 4.52 | 1.23 | 0.74 | 3.24 | 41.18 |
| 1947 | 3.13 | 3.15 | 3.62 | 5.00 | 5.68 | 3.13 | 3.64 | 4.55 | 4.45 | 3.55 | 7.00 | 3.30 | 50.20 |
| 1948 | 2.84 | 2.17 | 3.56 | 2.52 | 5.44 | 6.71 | 2.61 | 3.95 | 1.70 | 1.37 | 5.88 | 6.28 | 45.03 |
| 1949 | 5.22 | 3.78 | 1.39 | 4.16 | 5.07 | 0.30 | 2.70 | 3.09 | 3.25 | 2.48 | 1.94 | 2.62 | 36.00 |
| 1950 | 4.52 | 4.65 | 3.41 | 3.01 | 3.85 | 4.29 | 2.17 | 4.28 | 1.39 | 3.11 | 5.81 | 4.85 | 45.34 |
| Av. 33 yrs. | 3.73 | 3.21 | 3.95 | 3.74 | 4.06 | 4.42 | 4.23 | 3.87 | 4.02 | 2.98 | 4.34 | 3.55 | 46.10 |

WESTFIELD, MASS. (State Sanatorium)—Elevation, 210 feet
Record: January, 1930, to December, 1950

| Year | Jan. | Feb. | Mar. | Apr. | May | June | July | Aug. | Sept. | Oct. | Nov. | Dec. | Annual |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1942 | 3.89 | 2.19 | 6.19 | 0.75 | 3.99 | 4.69 | 5.65 | 2.89 | 4.73 | 4.46 | 5.75 | 6.35 | 51.53 |
| 1943 | 2.90 | 1.40 | 3.28 | 3.44 | 5.19 | 3.23 | 5.79 | 0.71 | 1.55 | 6.04 | 5.00 | 0.60 | 39.13 |
| 1944 | 1.54 | 1.98 | 4.52 | 4.71 | 1.68 | 4.40 | 1.92 | 1.18 | 7.22 | 1.86 | 5.01 | 3.59 | 39.61 |
| 1945 | 3.12 | 3.52 | 2.13 | 5.63 | 6.87 | 6.24 | 6.26 | 4.89 | 2.25 | 2.09 | 4.29 | 4.93 | 52.22 |
| 1946 | 2.57 | 2.89 | 1.61 | 2.27 | 7.05 | 3.05 | 6.42 | 3.87 | 4.21 | 1.10 | 0.76 | 2.48 | 38.28 |
| 1947 | 2.86 | 2.36 | 2.75 | 4.74 | 4.95 | 3.01 | 3.05 | 3.03 | 4.71 | 3.60 | 6.41 | 2.08 | 43.55 |
| 1948 | 2.73 | 1.99 | 3.61 | 2.57 | 5.63 | 6.44 | 2.65 | 4.41 | 1.37 | 1.01 | 5.52 | 4.66 | 42.59 |
| 1949 | 4.83 | 3.32 | 1.25 | 4.19 | 3.84 | 0.39 | 1.92 | 4.94 | 2.92 | 2.18 | 2.08 | 2.68 | 34.54 |
| 1950 | 4.41 | 4.05 | 3.38 | 3.25 | 4.14 | 2.82 | 2.12 | 4.27 | 1.39 | 2.43 | 5.25 | 4.85 | 42.36 |
| Av. 21 yrs. | 3.80 | 2.89 | 3.74 | 3.59 | 4.13 | 4.51 | 4.02 | 3.71 | 4.01 | 2.87 | 4.06 | 3.38 | 44.71 |

WESTHAMPTON, MASS. (White Reservoir, Holyoke Water Works)—Elevation, 750 feet
Record: January, 1919, to December, 1950

| Year | Jan. | Feb. | Mar. | Apr. | May | June | July | Aug. | Sept. | Oct. | Nov. | Dec. | Annual |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1942 | 2.54 | 3.35 | 6.80 | 1.45 | 5.38 | 3.38 | 7.00 | 2.52 | 5.89 | 4.99 | 5.65 | 5.85 | 54.80 |
| 1943 | 2.86 | 1.49 | 3.83 | 3.94 | 6.91 | 2.63 | 6.22 | 2.13 | 1.71 | 7.56 | 4.66 | 0.66 | 44.60 |
| 1944 | 1.47 | 2.36 | 4.51 | 4.01 | 0.92 | 4.69 | 3.52 | 2.37 | 6.64 | 2.05 | 4.53 | 3.88 | 40.95 |
| 1945 | 3.69 | 4.29 | 2.18 | 5.34 | 7.86 | 6.04 | 8.66 | 3.19 | 3.80 | 2.06 | 3.92 | 4.31 | 55.34 |
| 1946 | 2.59 | 2.78 | 1.68 | 2.23 | 6.96 | 2.76 | 4.70 | 2.91 | 5.13 | 1.66 | 0.72 | 2.89 | 37.01 |
| 1947 | 3.78 | 2.59 | 3.37 | 3.97 | 5.58 | 3.73 | 4.54 | 3.95 | 3.30 | 3.03 | 7.39 | 2.54 | 47.77 |
| 1948 | 2.49 | 3.18 | 3.18 | 2.97 | 6.13 | 6.07 | 2.12 | 4.86 | 1.14 | 1.95 | 4.69 | 6.31 | 45.09 |
| 1949 | 5.70 | 2.96 | 2.42 | 4.50 | 4.52 | 0.65 | 3.09 | 3.60 | 4.01 | 2.46 | 2.35 | 3.13 | 39.19 |
| 1950 | 4.63 | 4.16 | 4.55 | 3.21 | 5.56 | 3.20 | 2.04 | 3.67 | 1.79 | 2.59 | 6.73 | 5.14 | 47.27 |
| Av. 32 yrs. | 3.32 | 2.98 | 3.76 | 3.79 | 4.42 | 4.34 | 4.16 | 3.78 | 4.22 | 3.30 | 4.30 | 3.31 | 45.68 |

WESTON, MASS. (Stony Brook Reservoir, Cambridge Water Works)—Elevation, 60 feet
Record: January, 1890, to August, 1946

| Year | Jan. | Feb. | Mar. | Apr. | May | June | July | Aug. | Sept. | Oct. | Nov. | Dec. | Annual |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1942 | 4.27 | 4.46 | 7.43 | 2.49 | 2.26 | 4.30 | 5.55 | 2.84 | 2.22 | 3.41 | 5.69 | 6.32 | 51.24 |
| 1943 | 4.26 | 1.34 | 6.09 | 3.13 | 4.61 | 2.48 | 3.73 | 1.25 | 1.47 | 5.35 | 3.40 | 1.12 | 38.23 |
| 1944 | 1.98 | 5.29 | 6.57 | 4.29 | 0.80 | 4.91 | 2.44 | 1.70 | 5.83 | 3.32 | 6.30 | 3.96 | 47.39 |
| 1945 | 2.20 | 7.05 | 2.18 | 2.98 | 5.42 | 8.84 | 3.79 | 3.70 | 2.35 | 3.93 | 8.89 | 5.68 | 57.01 |
| 1946 | 5.66 | 3.67 | 5.35 | 3.93 | 8.25 | 4.71 | 2.11 | 8.88 | — | — | — | — | — |
| Av. 54 yrs. | 3.67 | 3.62 | 4.92 | 3.72 | 3.07 | 3.51 | 3.49 | 3.64 | 3.69 | 3.31 | 3.54 | 3.63 | 43.11 |

WESTON, MASS. (Weston College)
Record: January, 1929, to December, 1950

| Year | Jan. | Feb. | Mar. | Apr. | May | June | July | Aug. | Sept. | Oct. | Nov. | Dec. | Annual |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1942 | 3.46 | 3.58 | 7.51 | 2.04 | 2.09 | 4.01 | 5.18 | 3.08 | 1.72 | 3.23 | 5.44 | 6.63 | 47.97 |
| 1943 | 2.69 | 1.09 | 3.99 | 3.45 | 4.51 | 3.18 | 3.96 | 1.08 | 1.22 | 5.07 | 3.78 | 0.93 | 34.95 |
| 1944 | 1.94 | 2.03 | 4.21 | 3.89 | 0.71 | 4.83 | 1.75 | 1.89 | 5.64 | 2.09 | 6.26 | 2.80 | 38.04 |
| 1945 | 2.84 | 3.78 | 1.88 | 3.02 | 4.70 | 7.07 | 2.98 | 5.93 | 1.23 | 2.99 | 6.79 | 6.90 | 50.11 |
| 1946 | 2.94 | 2.95 | 1.29 | 2.89 | 5.26 | 3.37 | 2.61 | — | 2.10 | 0.50 | 1.26 | — | — |
| 1947 | 2.93 | 2.05 | 3.57 | 3.99 | 4.73 | 3.16 | 5.86 | 1.61 | 2.75 | 1.25 | 3.97 | 3.89 | 39.76 |
| 1948 | 4.48 | 2.36 | 3.09 | 2.61 | 5.56 | 5.19 | 6.28 | 1.18 | 0.64 | 2.98 | 6.86 | 1.68 | 42.91 |
| 1949 | 3.59 | 2.81 | 2.46 | 4.53 | 4.20 | 0.77 | — | 1.24 | 7.54 | 1.68 | 2.56 | 2.18 | — |
| 1950 | 4.72 | 2.57 | 3.52 | 2.21 | 1.70 | 1.94 | 1.88 | 6.42 | 1.69 | 2.07 | 4.97 | 3.58 | 37.27 |
| Av. 20 yrs. | 3.48 | 2.83 | 3.85 | 3.76 | 3.11 | 4.09 | 3.33 | 3.34 | 3.70 | 3.15 | 3.95 | 3.08 | 41.67 |

WILLIAMSBURG, MASS.—Elevation, 550 feet
Record: January, 1918, to December, 1950

| Year | Jan. | Feb. | Mar. | Apr. | May | June | July | Aug. | Sept. | Oct. | Nov. | Dec. | Annual |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1942 | 2.95 | 1.90 | 6.09 | 0.54 | 5.48 | 3.31 | 6.27 | 7.11 | 4.48 | 4.70 | 5.16 | 5.86 | 53.85 |
| 1943 | 2.26 | 1.81 | 2.39 | 4.13 | 5.60 | 2.83 | 9.03 | 1.60 | 2.32 | 6.89 | 5.45 | 0.73 | 45.04 |
| 1944 | 1.72 | 2.10 | 4.97 | 4.22 | 1.25 | 3.51 | 3.30 | 2.35 | 5.43 | 2.22 | 5.56 | 3.90 | 40.33 |
| 1945 | 4.37 | 4.25 | 2.80 | 5.50 | 3.02 | 7.15 | 7.66 | 6.39 | 4.76 | 3.03 | 4.95 | 5.48 | 64.16 |
| 1946 | 2.72 | 3.11 | 1.48 | 2.53 | 6.88 | 2.94 | 4.95 | 2.56 | 7.31 | 1.69 | 1.29 | 3.71 | 41.17 |
| 1947 | 3.85 | 3.67 | 2.89 | 4.70 | 4.00 | 3.46 | 4.05 | 4.73 | 4.08 | 2.60 | 6.89 | 2.98 | 47.90 |
| 1948 | 3.86 | 2.85 | 3.94 | 3.47 | 6.40 | 6.83 | 3.20 | 3.37 | 3.27 | 1.30 | 4.73 | 4.38 | 47.60 |
| 1949 | 4.80 | 3.64 | 1.61 | 3.87 | 5.69 | 0.95 | 4.37 | 4.38 | 3.94 | 3.01 | 2.55 | 3.06 | 41.87 |
| 1950 | 5.62 | 3.54 | 5.57 | 3.81 | 5.05 | 2.80 | 2.76 | 3.07 | 2.33 | 2.37 | 7.72 | 5.20 | 49.84 |
| Av. 38 yrs. | 3.29 | 2.81 | 3.49 | 3.65 | 4.21 | 4.18 | 4.24 | 3.91 | 4.20 | 3.24 | 4.11 | 3.38 | 44.71 |

WILMINGTON, MASS. (Wilmington Water Works)
Record: December, 1933, to December, 1950

| Year | Jan. | Feb. | Mar. | Apr. | May | June | July | Aug. | Sept. | Oct. | Nov. | Dec. | Annual |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1942 | 3.65 | 2.60 | 6.44 | 1.46 | 2.35 | 3.46 | 5.57 | 1.57 | 1.74 | 3.01 | 4.13 | 5.38 | 41.36 |
| 1943 | 2.56 | 0.99 | 2.86 | 2.70 | 5.36 | 2.24 | 6.28 | 1.39 | 0.39 | 5.01 | 4.35 | 0.92 | 35.05 |
| 1944 | 2.68 | 2.07 | 3.82 | 3.16 | 0.61 | 5.05 | 2.67 | 3.69 | 6.29 | 1.85 | 5.59 | 2.63 | 40.11 |
| 1945 | 2.36 | 3.23 | 1.59 | 2.39 | 3.94 | 6.21 | 3.07 | 2.84 | 1.39 | 2.39 | 6.50 | 5.62 | 41.53 |
| 1946 | 3.67 | 2.66 | 1.52 | 2.48 | 4.82 | 3.43 | 1.71 | 7.55 | 2.80 | 0.56 | 0.98 | 3.55 | 35.73 |
| 1947 | 2.57 | 0.95 | 3.22 | 4.80 | 3.20 | 2.63 | 6.29 | 1.36 | 2.73 | 0.42 | 5.54 | 3.10 | 36.81 |
| 1948 | 4.17 | 1.88 | 2.35 | 2.67 | 5.03 | 5.13 | 3.17 | 1.33 | 0.98 | 2.60 | 5.30 | 1.46 | 36.07 |
| 1949 | 3.45 | 3.02 | 1.12 | 3.75 | 3.75 | 0.81 | 1.79 | 5.46 | 4.61 | 1.92 | 2.69 | 1.72 | 34.09 |
| 1950 | 4.34 | 2.71 | 3.51 | 2.20 | 1.52 | 1.98 | 2.60 | 4.02 | 1.20 | 3.20 | 6.43 | 3.24 | 36.95 |
| Av. 17 yrs. | 3.42 | 2.40 | 3.08 | 3.11 | 2.99 | 3.63 | 3.36 | 3.07 | 3.19 | 2.44 | 3.89 | 3.22 | 37.80 |

WINCHENDON, MASS.—Elevation, 1,130 feet
Record: August, 1893, to December, 1950

| Year | Jan. | Feb. | Mar. | Apr. | May | June | July | Aug. | Sept. | Oct. | Nov. | Dec. | Annual |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1942 | 3.23 | 1.72 | 6.61 | 1.35 | 2.48 | 5.33 | 5.28 | 2.39 | 4.13 | 3.44 | 4.27 | 4.94 | 45.17 |
| 1943 | 2.29 | 1.45 | 2.64 | 3.91 | 6.57 | 1.75 | 4.60 | 3.31 | 2.00 | 5.53 | 6.65 | 0.58 | 41.28 |
| 1944 | 1.33 | 1.84 | 3.56 | 3.15 | 0.99 | 5.92 | 3.77 | 0.44 | 5.66 | 1.80 | 3.18 | 2.54 | 37.18 |
| 1945 | 2.76 | 3.34 | 1.75 | 4.74 | 5.21 | 6.46 | 5.91 | 1.90 | 3.14 | 2.31 | 2.93 | 3.01 | 43.46 |
| 1946 | 2.69 | 2.93 | 1.72 | 3.45 | 5.09 | 4.96 | 3.76 | 4.80 | 4.62 | 1.09 | 0.98 | 3.04 | 39.13 |
| 1947 | 3.01 | 2.28 | 2.81 | 4.19 | 3.56 | 4.46 | 3.22 | 1.30 | 2.12 | 0.80 | 5.11 | 2.45 | 35.31 |
| 1948 | 3.48 | 2.06 | 3.09 | 3.05 | 5.93 | 5.12 | 4.05 | 1.08 | 0.66 | 1.82 | 6.86 | 2.44 | 39.64 |
| 1949 | 4.18 | 2.95 | 1.44 | 3.41 | 3.36 | 2.11 | 3.44 | 2.57 | 3.51 | 2.52 | 1.81 | 2.35 | 33.65 |
| 1950 | 4.63 | 2.74 | 2.18 | 2.87 | 2.53 | 4.56 | 2.38 | 5.01 | 1.14 | 1.52 | 7.15 | 3.51 | 40.22 |
| Av. 56 yrs. | 3.26 | 2.85 | 3.55 | 3.47 | 3.32 | 3.99 | 4.26 | 3.79 | 3.98 | 3.00 | 3.66 | 3.29 | 42.42 |

WINCHENDON, MASS. (Birch Hill Dam)—Elevation, 860 feet
Record: July, 1940, to December, 1950

| Year | Jan. | Feb. | Mar. | Apr. | May | June | July | Aug. | Sept. | Oct. | Nov. | Dec. | Annual |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1940 | — | — | — | — | — | — | 2.73 | 1.75 | 2.02 | 1.13 | 5.94 | 3.31 | — |
| 1941 | 2.26 | 1.64 | 1.29 | 0.65 | 2.14 | 2.57 | 2.96 | — | — | — | 3.03 | 2.51 | — |
| 1942 | 3.25 | 1.68 | 6.71 | — | 3.20 | 5.61 | 5.08 | 1.27 | 2.79 | 2.44 | — | — | — |
| 1943 | 1.81 | 1.47 | 2.39 | 3.12 | 5.00 | 2.19 | 4.61 | 2.48 | 1.17 | 4.48 | 5.80 | 0.65 | 35.17 |
| 1944 | 1.09 | 2.02 | 3.79 | 3.23 | 0.94 | 9.90 | 3.93 | 0.49 | 5.35 | 1.66 | 2.83 | 2.13 | 37.36 |
| 1945 | 3.37 | 3.41 | 1.87 | 4.84 | 5.39 | 5.27 | 6.11 | 2.69 | 3.67 | 2.43 | 3.34 | 3.78 | 46.17 |
| 1946 | 2.36 | 2.57 | 1.66 | 2.40 | 5.31 | 3.46 | 3.76 | 5.09 | 3.89 | 1.24 | 1.00 | 3.05 | 35.79 |
| 1947 | 2.95 | 2.23 | 3.31 | 3.58 | 3.45 | 3.74 | 4.37 | 1.60 | 2.97 | 0.76 | 4.99 | 2.57 | 36.52 |
| 1948 | 2.83 | 1.89 | 2.71 | 3.16 | 5.68 | 4.57 | 1.90 | 1.09 | 0.77 | 1.62 | 6.01 | 2.09 | 34.32 |
| 1949 | 3.69 | 2.60 | 2.20 | 3.94 | 3.21 | 1.68 | 2.47 | 2.25 | 3.91 | 2.17 | 1.73 | 2.48 | 32.33 |
| 1950 | 4.38 | 2.39 | 2.12 | 2.91 | 2.50 | 4.58 | 2.28 | 5.37 | 1.60 | 1.37 | 7.06 | 3.95 | 40.51 |
| Av. 8 yrs. | 2.81 | 2.32 | 2.51 | 3.40 | 3.94 | 4.42 | 3.68 | 2.63 | 2.92 | 1.97 | 4.10 | 2.58 | 37.28 |

WINCHESTER, MASS. (North Reservoir)—Elevation, 90 feet
Record: January, 1875, to December, 1950

| Year | Jan. | Feb. | Mar. | Apr. | May | June | July | Aug. | Sept. | Oct. | Nov. | Dec. | Annual |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1942 | 4.16 | 3.12 | 7.20 | 1.98 | 2.48 | 3.41 | 3.24 | 2.74 | 2.24 | 3.14 | 4.65 | 5.31 | 43.67 |
| 1943 | 2.94 | 1.13 | 4.19 | 3.35 | 5.22 | 1.85 | 3.78 | 1.67 | 1.53 | 6.29 | 3.94 | 0.91 | 36.80 |
| 1944 | 2.71 | 2.15 | 3.94 | 3.84 | 0.70 | 4.96 | 1.72 | 2.33 | 6.63 | 2.99 | 6.02 | 2.96 | 40.95 |
| 1945 | 2.76 | 3.68 | 2.08 | 2.88 | 4.64 | 6.26 | 2.55 | 3.74 | 1.14 | 2.75 | 8.15 | 6.90 | 47.53 |
| 1946 | 3.70 | 3.10 | 1.28 | 2.72 | 5.09 | 2.93 | 3.60 | 10.37 | 2.10 | 0.32 | 1.32 | 4.36 | 40.89 |
| 1947 | 3.15 | 1.11 | 3.34 | 4.53 | 4.80 | 2.97 | 4.39 | 3.54 | 2.46 | 0.63 | 7.31 | 3.92 | 42.15 |
| 1948 | 4.53 | 2.04 | 2.87 | 2.61 | 4.87 | 5.43 | 4.81 | 1.49 | 1.20 | 3.05 | 4.79 | 1.34 | 39.03 |
| 1949 | 4.34 | 3.39 | 1.13 | 4.20 | 3.49 | 0.71 | 1.87 | 4.47 | 4.21 | 1.77 | 2.83 | 2.18 | 34.59 |
| 1950 | 4.25 | 3.39 | 3.74 | 2.12 | 1.32 | 1.25* | 1.23 | 4.22 | 1.67 | 2.77 | 6.01 | 2.83 | 34.80 |
| Av. 76 yrs. | 3.63 | 3.38 | 3.85 | 3.54 | 3.15 | 3.39 | 3.29 | 3.72 | 3.44 | 3.16 | 3.77 | 3.47 | 41.79 |

*Interpolated.

WORCESTER, MASS. (Worcester Sewage Disposal Works)—Elevation, 400 feet
Record: August, 1895, to December, 1950

| Year | Jan. | Feb. | Mar. | Apr. | May | June | July | Aug. | Sept. | Oct. | Nov. | Dec. | Annual |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1942 | 4.33 | 2.94 | 6.73 | 1.53 | 3.25 | 6.43 | 5.14 | 1.94 | 2.34 | 2.97 | 5.15 | 5.58 | 48.33 |
| 1943 | 2.45 | 1.55 | 3.85 | 4.23 | 5.50 | 1.69 | 4.56 | 0.97 | 0.50 | 6.00 | 5.26 | 0.95 | 37.51 |
| 1944 | 1.20 | 2.30 | 4.39 | 4.49 | 0.97 | 5.44 | 1.66 | 2.01 | 6.32 | 2.10 | 5.92 | 3.07 | 39.87 |
| 1945 | 3.13 | 3.31 | 2.70 | 4.21 | 6.37 | 6.10 | 3.58 | 4.11 | 1.75 | 2.20 | 5.78 | 5.58 | 48.82 |
| 1946 | 3.35 | 3.31 | 1.55 | 2.83 | 5.70 | 4.15 | 2.05 | 8.05 | 4.26 | 0.81 | 1.53 | 3.78 | 41.37 |
| 1947 | 3.10 | 2.17 | 3.17 | 4.92 | 3.95 | 3.66 | 5.35 | 2.22 | 3.99 | 1.25 | 5.08 | 2.45 | 41.31 |
| 1948 | 3.81 | 2.16 | 4.04 | 3.41 | 7.42 | 4.07 | 6.12 | 2.41 | 0.78 | 3.15 | 6.95 | 2.69 | 47.01 |
| 1949 | 4.18 | 2.90 | 1.84 | 3.95 | 3.49 | 0.44 | 1.23 | 2.61 | 4.04 | 1.88 | 2.75 | 2.82 | 32.13 |
| 1950 | 4.08 | 4.10 | 3.60 | 3.65 | 3.70 | 2.39 | 3.61 | 5.93 | 2.47 | 2.35 | 6.34 | 4.21 | 46.43 |
| Av. 55 yrs. | 3.44 | 3.21 | 3.92 | 3.68 | 3.34 | 3.78 | 3.66 | 3.69 | 4.02 | 3.03 | 3.86 | 3.52 | 43.15 |

WORCESTER, MASS. (Winter Hill Observatory)—Elevation, 625 feet
Record: January, 1905, to March, 1908 — January, 1915, to December, 1950

| Year | Jan. | Feb. | Mar. | Apr. | May | June | July | Aug. | Sept. | Oct. | Nov. | Dec. | Annual |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1942 | 3.57 | 3.66 | 7.62 | 1.26 | 3.00 | 3.79 | 4.81 | 2.70 | 2.44 | 3.46 | 5.23 | 5.96 | 47.50 |
| 1943 | 2.53 | 1.52 | 3.30 | 4.27 | 5.15 | 3.40 | 5.16 | 1.93 | 0.58 | 5.35 | 3.50 | 0.84 | 37.53 |
| 1944 | 1.29 | 2.20 | 4.36 | 4.16 | 1.03 | 5.35 | 0.63 | 0.90 | 5.44 | 1.74 | 5.47 | 3.25 | 35.82 |
| 1945 | 3.38 | 3.73 | 2.35 | 4.40 | 6.22 | 6.79 | 3.65 | 3.78 | 1.78 | 2.03 | 5.43 | 5.21 | 48.75 |
| 1946 | 3.32 | 3.31 | 1.55 | 2.43 | 6.50 | 3.02 | 3.45 | 7.01 | 4.01 | 0.94 | 1.50 | 3.27 | 40.31 |
| 1947 | 2.85 | 1.65 | 3.36 | 4.72 | 4.16 | 3.33 | 4.98 | 1.07 | 3.33 | 1.17 | 4.76 | 2.36 | 37.74 |
| 1948 | 3.15 | 2.05 | 3.30 | 3.44 | 7.38 | 6.17 | 5.77 | 1.86 | 1.04 | 3.30 | 5.51 | 2.44 | 45.41 |
| 1949 | 4.27 | 2.70 | 1.70 | 5.05 | 3.78 | 0.87 | 1.29 | 1.78 | 3.52 | 1.88 | 3.02 | 3.05 | 32.91 |
| 1950 | 4.13 | 3.95 | 3.89 | 3.98 | 3.26 | 2.64 | 2.46 | 5.90* | 1.74 | 2.76 | 3.24 | 3.94 | 41.89 |
| Av. 39 yrs. | 3.41 | 2.93 | 3.50 | 3.61 | 3.55 | 3.87 | 3.82 | 3.37 | 3.94 | 3.02 | 3.87 | 3.32 | 42.21 |

*Interpolated.

WORTHINGTON, MASS.—Elevation, 1,500 feet
Record: January, 1917, to December, 1950

| Year | Jan. | Feb. | Mar. | Apr. | May | June | July | Aug. | Sept. | Oct. | Nov. | Dec. | Annual |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1942 | 3.84 | 2.29 | 6.02 | 1.91 | 4.73 | 3.37 | 6.33 | 3.45 | 5.43 | 4.96 | 5.31 | 6.40 | 53.54 |
| 1943 | 2.78 | 2.01 | 3.20 | 3.82 | 7.41 | 3.26 | 6.93 | 2.47 | 1.41 | 6.00 | 5.69 | 0.72 | 45.70 |
| 1944 | 1.38 | 2.40 | 4.86 | 4.18 | 1.57 | 5.29 | 4.89 | 1.09 | 5.17 | 2.34 | 4.64 | 3.89 | 41.70 |
| 1945 | 3.77 | 4.16 | 2.54 | 6.33 | 7.51 | 7.21 | 6.79 | 3.13 | 3.79 | 2.75 | 3.96 | 3.72 | 55.66 |
| 1946 | 2.66 | 3.61 | 1.37 | 2.71 | 6.95 | 4.65 | 4.70 | 2.58 | 6.03 | 2.00 | 1.27 | 3.93 | 42.46 |
| 1947 | 4.19 | 2.88 | 4.66 | 5.29 | 3.96 | 3.22 | 5.61 | 2.22 | 2.51 | 2.82 | 5.62 | 2.47 | 45.45 |
| 1948 | 2.14 | 2.83 | 3.57 | 3.36 | 7.76 | 8.14 | 2.10 | 3.20 | 1.59 | 1.93 | 5.14 | 10.92 | 52.68 |
| 1949 | 4.69 | 3.27 | 1.48 | 3.65 | 4.39 | 2.03 | 3.71 | 3.70 | 3.08 | 2.93 | 1.71 | 2.96 | 37.60 |
| 1950 | 5.02 | 3.55 | 3.08 | 2.81 | 5.19 | 3.16 | 3.42 | 3.49 | 1.47 | 3.07 | 7.12 | 4.36 | 45.74 |
| Av. 34 yrs. | 3.36 | 3.00 | 3.66 | 3.67 | 4.22 | 4.55 | 4.20 | 3.79 | 4.27 | 3.39 | 4.26 | 3.54 | 45.91 |

WRENTHAM, MASS.—Elevation, 250 feet
Record: January, 1921, to December, 1950

| Year | Jan. | Feb. | Mar. | Apr. | May | June | July | Aug. | Sept. | Oct. | Nov. | Dec. | Annual |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1942 | 4.30 | 2.86 | 7.38 | 1.11 | 2.20 | 3.55 | 5.92 | 3.80 | 2.16 | 3.87 | 4.98 | 5.33 | 47.46 |
| 1943 | 3.38 | 1.26 | 2.26 | 3.79 | 4.97 | 3.07 | 4.10 | 1.82 | 1.26 | 5.55 | 3.39 | 1.16 | 36.01 |
| 1944 | 1.66 | 2.25 | 5.12 | 4.26 | 0.81 | 4.26 | 0.93 | 1.35 | 8.68 | 3.48 | 7.40 | 3.48 | 43.68 |
| 1945 | 3.29 | 3.10 | 1.52 | 3.25 | 4.88 | 6.51 | 4.99 | 4.03 | 2.19 | 2.86 | 8.96 | 6.96 | 52.55 |
| 1946 | 3.56 | 2.99 | 1.68 | 2.61 | 6.29 | 3.90 | 0.79 | 10.01 | 2.47 | 0.68 | 1.23 | 3.39 | 39.61 |
| 1947 | 2.90 | 1.44 | 2.83 | 4.92 | 4.96 | 4.52 | 4.76 | 2.07 | 5.92 | 1.42 | 6.04 | 3.70 | 45.48 |
| 1948 | 5.65 | 1.95 | 3.56 | 4.59 | 6.58 | 3.60 | 6.59 | 2.31 | 1.25 | 5.12 | 6.37 | 1.83 | 49.40 |
| 1949 | 3.64 | 3.98 | 1.86 | 4.52 | 3.88 | 0.20 | 0.64 | 3.94 | 3.20 | 1.64 | 3.14 | 1.72 | 32.36 |
| 1950 | 3.48 | 3.99 | 3.18 | 3.20 | 2.21 | 1.94 | 2.92 | 5.59 | 1.59 | 2.27 | 7.38 | 3.36 | 41.11 |
| Av. 30 yrs. | 3.75 | 2.94 | 3.75 | 3.92 | 3.34 | 3.89 | 3.61 | 4.07 | 3.50 | 3.12 | 4.25 | 3.42 | 43.56 |

# PROCEEDINGS

NOVEMBER 1953 MEETING

HOTEL STATLER, BOSTON, MASS.

THURSDAY, NOVEMBER 19, 1953

President William B. Duffy in the Chair.

Secretary Knox announced the election of the following to membership in the Association:

Albert H. Andrews, Superintendent, Water Department, Norton, Mass.; Sterling G. Brisbin, Charles T. Main, Inc., Boston, Mass.; Martin E. Flentje, Research Engineer, American Water Works Service Co., Inc., Philadelphia, Pa.; Richard F. Greeley, Engineer, Metcalf & Eddy, Boston, Mass.; William E. Lyons, Superintendent, Albertson Water District, Albertson, N. Y.; Clifford L. Williams, Superintendent, Lincoln Water District, Lincoln, Me.; Stephen M. Hurley, Sanitary Engineer, Rhode Island Department of Health, Cranston, R. I.; Everett L. MacLeman, Assistant Professor, Yale University, New Haven, Conn.

*Associate Member.* Precision Machine Co., Somerville, Mass.

On motion duly made and seconded, the following specifications were adopted:

C100-52T — Tentative Standard Specifications for Cast-Iron Pressure Fittings. Printed, JOURNAL OF N.E.W.W.A., June, 1953.

C500-52T — Tentative Standard Specifications for Gate Valves for Ordinary Water Works Service. Printed, JOURNAL OF N.E.W.W.A., March, 1953.

C502-53 — Standard Specifications for Fire Hydrants for Ordinary Water Works Service. Printed, JOURNAL OF N.E.W.W.A., September, 1953.

A21.6 — American Standard Specifications for Cast Iron Pipe Centrifugally Cast in Metal Molds, for Water or Other Liquids. Printed, JOURNAL OF N.E.W.W.A., September, 1953.

A21.8 — American Standard Specifications for Cast Iron Pipe Centrifugally Cast in Sand-Lined Molds, for Water or Other Liquids. Printed, JOURNAL OF N.E.W.W.A., September, 1953.

A21.11 — American Standard Specifications for a Mechanical Joint for Cast Iron Pressure Pipe and Fittings. Printed, JOURNAL OF N.E.W.W.A., June, 1953.

A paper on "Restoration of Worcester Water Service after Tornado," illustrated with tornado films, was read by Charles B. Hardy, Superintendent of the Bureau of Water, Worcester, Mass.

A paper on "Believe-It-or-Not Experiences with Chemical Feeders" was read by R. J. Leveque, Omega Machine Co., Providence, R. I.

A paper on "Danvers, Massachusetts, Water Supply" was read by Vernon C. Russell, Water Department, Danvers, Mass.

## DECEMBER 1953 MEETING

### HOTEL STATLER, BOSTON, MASS.

### THURSDAY, DECEMBER 17, 1953

President William B. Duffy in the Chair.

PRESIDENT DUFFY. Since our last meeting Professor George E. Russell has passed away. Professor Russell was head of the Hydraulics Department of Massachusetts Institute of Technology, and a noted authority in this field. He was active in the affairs of the New England Water Works Association, which he joined in November, 1919, and conducted the Water Works School of the Association from 1936 to 1946. We all regret his passing, and it would be appropriate if we stand a moment in tribute to him.

(*The members stand in silence.*)

In the absence of Joe Knox, who had to fly to New York on one of his many duties, I shall read a list of the members who were elected today:

Ferd C. Arens, New England District Manager, Rockwell Manufacturing Co., Boston, Mass.; Charles G. Bourgin, Engineer and General Manager, Water Department, East Orange, N. J.; Thomas P. Gallagher, Sales Engineer, Rockwell Manufacturing Co., Boston, Mass.

*Reinstated.* Hervey J. Skinner, Vice-President, American Conditioning House, Inc., Boston, Mass.

The first item on the program this afternoon calls for a vote on the proposed amendment to the Constitution, which is printed on the reverse side of the program. This is an amendment recommended by the Executive Committee:

"Section 1, Art. VIII of the Constitution is hereby amended by inserting after the word 'September' the following words 'or October,' so as to read as follows:

"Section 1, Art. VIII. The Annual Convention of the Association shall open at such time and place in September or October as the Executive Committee shall designate."

* * * *

Upon motion duly made and seconded, the above amendment was adopted.

A talk on "Activities of the Water and Sewage Division, Business and Defense Services Administration" was given by Thomas Quigley, Director Water and Sewage Division, Business and Defense Services Administration, Department of Commerce, Washington, D. C.

A paper on "Operating Experiences of the Kittery, Maine, Water District" was read by Francis L. Hatch, Superintendent, Kittery Water District, Kittery, Me.

A film, "Production of Cast-Iron Pipe," was shown through the courtesy of the McWane Cast Iron Pipe Co., Birmingham, Ala.

# INDEX OF ADVERTISERS


| | Page |
|---|---|
| Badger Meter Mfg. Co. | Following front cover |
| Bahr, Ray | xxii |
| B-I-F Industries | Following front cover |
| Camp, Dresser & McKee | ii |
| Cast Iron Pipe Research Assn. | xxxi |
| Cement Lined Pipe Co. | xi |
| Centriline Corporation | Following front cover |
| Chapman, R. E. | ii |
| Coffin & Richardson | ii |
| Chicago Bridge & Iron Co. | xxiv |
| Crosby, Irving B. | ii |
| Dixon Crucible Co., Joseph | v |
| Eddy Valve Co. | xix |
| Eureka Pipe Co., Inc. | xxiv |
| Fairbanks, Morse & Co. | Following front cover |
| Fay, Spofford & Thorndike | ii |
| Flexible Sewer Rod Equipment Co. | xxii |
| Ford Meter Box Co. | Following front cover |
| Gunite Restoration Company, Inc. | ii |
| Haley & Ward | ii |
| Hays Mfg. Co. | xvii |
| Hazen & Sawyer | iii |
| Hersey Mfg. Co. | vi |
| Hilco Supply | xiii |
| Hydraulic Development Corp. | xii |
| Johns-Manville | Following front cover |
| Johnson Flastic Corp. | xiii |
| Keasbey & Mattison Company | vii |
| Kennedy Valve Mfg. Co. | xv |
| Knowles, Morris, Inc. | ii |
| Koppers Company, Inc. | Following front cover |
| Layne-New York Co., Inc. | iv |
| Leadite Co. | Back cover |
| Leggette & Brashears | ii |
| Lock Joint Pipe Co. | Following front cover |
| Maguire & Assoc., Chas. A. | iii |
| Maher, D. L., Co. | iii |
| Metcalf & Eddy | ii |
| Morris Knowles, Inc. | ii |
| Mueller Co. | Following front cover |
| National Water Main Cleaning Co. | x |
| Neptune Meter Co. | ix |
| Northrop & Co. | xi |
| Pierce-Perry Co. | iii |
| Pipe Founders Sales Corp. | xxii |
| Pirnie, Malcolm | iii |
| Pitometer Co. | iii |
| Pittsburgh-Des Moines Steel Co. | Following front cover |
| Pittsburgh Equitable Meter Co. | Following front cover |
| Joseph G. Pollard Co., Inc. | Following front cover |
| Precision Machine Company | xiv |
| H. R. Prescott & Sons, Inc. | xviii |
| % Proportioneers, Inc. % | Following front cover |
| Public Works Supply Co. | xi |
| Rensselaer Valve Co. | xxv |
| Reppuci, C. & Sons, Inc. | iii |
| Ross Valve Mfg. Co. | xxiii |
| Smith Mfg. Co., The A. P. | Following front cover |
| Turbine Equipment Co. | xvi |
| U. S. Cast Iron Pipe and Foundry Co. | xxxii |
| Wallace & Tiernan | xx |
| Warren Foundry and Pipe Corp. | xxi |
| Weston & Sampson | iii |
| White Construction Co., R. H. | xxiv |
| Whitman & Howard | iii |
| Wood, R. D., Co. | Following front cover |
| Worthington-Gamon Meter Divn. | viii |


(Classified index on page xxvii)

## ENGINEERS


**Coffin & Richardson, Inc.**

*Consulting Engineers*

Water Supply, Sewerage, Flood Control
Investigation, Design, Valuation
Incinerators

68 Devonshire St. .... Boston, Mass.

**HALEY & WARD**
**ENGINEERS**

Successors to Frank A. Barbour

Water Works and Sewerage
Valuations
Supervision of Construction and
Operation

TREMONT BUILDING BOSTON, MASS.

MALden 2-3800

**Gunite Restoration Co., Inc.**

Specializing in Pressure Concrete and
Grouting

595 Broadway, Malden 48, Mass.

**R. E. CHAPMAN COMPANY**

Oakdale, Massachusetts

GRAVEL DEVELOPED AND
GRAVEL PACKED WELLS

All Sizes to 60" Diameter
Best Equipped for Complete Test Drilling and
Development of Large Supplies

Tel. WEST BOYLSTON {5-3727 / 5-3221}

**CAMP, DRESSER & McKEE**

*Consulting Engineers*

6 Beacon Street
Boston 8, Massachusetts

Water Works and Water Treatment; Sewerage and Sewage Treatment; Municipal and Industrial Wastes; Investigations and Reports; Design and Supervision; Research and Development; Flood Control.

**FAY, SPOFFORD & THORNDIKE**
**ENGINEERS**

Charles M. Spofford — Ralph W. Horne
John Ayer — William L. Hyland
Bion A. Bowman — Frank L. Lincoln
Carroll A. Farwell — Howard J. Williams

Water Supply - Sewerage - Drainage
Structural and Foundation Problems
Investigations Reports Designs Valuations
Engineering Supervision

11 BEACON STREET BOSTON

**MORRIS KNOWLES INC.**

*Engineers*

*Water Supply and Purification, Sewerage and Sewage Disposal, Industrial Wastes, Valuations, Laboratory, City Planning.*

1312 PARK BUILDING
PITTSBURGH 22, PA.

**METCALF & EDDY**
**ENGINEERS**

Water, Sewage, Drainage, Refuse and
Industrial Wastes Problems

Airfields Valuations

Statler Building
Boston 16

**IRVING B. CROSBY**

*Consulting Engineering Geologist*

Investigations and Reports

Dams, Reservoirs, Tunnels, Ground
Water Resources and Supplies

6 Beacon Street, Boston 8, Mass.

**LEGGETTE & BRASHEARS**

*Consulting Ground Water Geologists*

Water Supply — Salt Water Problems
Dewatering — Investigations
Recharging — Reports

551 Fifth Avenue New York 17, N. Y.

## ENGINEERS


**Malcolm Pirnie Engineers**

*Civil and Sanitary Engineers*

Malcolm Pirnie — Ernest W. Whitlock
Robert D. Mitchell — Carl A. Arenander
Malcolm Pirnie, Jr.

Investigations, Reports, Plans
Supervision of Construction
and Operations
Appraisals and Rates

25 West 43rd St. New York 36, N. Y.

**THE PITOMETER COMPANY, INC.**

ENGINEERS

*Water Waste Surveys*
*Trunk Main Surveys*
*Water Distribution Studies*
*Water Measurements & Special Hydraulic Investigations*

50 Church Street New York City

**Charles A. Maguire & Associates**

*Engineers*

294 WASHINGTON ST. BOSTON, MASS.

**Hazen and Sawyer**

ENGINEERS

RICHARD HAZEN ALFRED W. SAWYER

Municipal and Industrial Water Supply
Purification and Distribution
Sewage Works and Waste Disposal
Investigations, Design,
Supervision of Construction and Operation

110 East 42nd St. New York 17, N. Y.

**D. L. MAHER CO.**

Water Supply Contractors

*Gravel Wall and Driven Wells*
*Municipal and Industrial Supplies*

38B Brattle Street - KIrkland 7-1438
Cambridge, Massachusetts

**WESTON & SAMPSON**

*Consulting Engineers*

Water Supply and Sewerage
Chemical and Bacteriological
Laboratory

14 BEACON ST. BOSTON, MASS.

**WHITMAN & HOWARD**

*Engineers*

Established 1869

Investigations, Designs, Estimates, Reports and Supervision, Valuations, etc., in all Water Works and Sewerage Problems.

89 BROAD ST. BOSTON, MASS.

**PIERCE-PERRY CO.**

*Wholesalers of*

Water Works Brass Goods
Byers Wrought Iron Pipe
Youngstown Steel Pipe
Valve and Service Boxes

236 Congress St., Boston, Mass.
Telephone, HAncock 6-7817 — 6-7818

**C. Reppucci & Sons, Inc.**

*General Contractors*

Ground Water Supply
Gravel Packed Wells — Driven Wells
Water Works — Reservoirs
Drainage and Sewerage Works

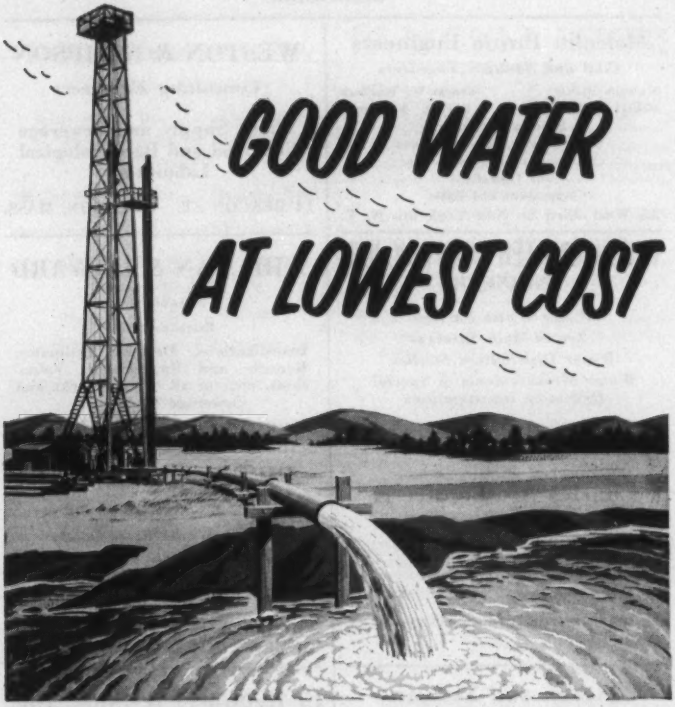
10 Garden Court St., Boston, Mass.
(Tel. LAfayette 3-7330)

**This Space Available**

**At a Cost of Only**

**$20.00**

**Per Year**




## LAYNE CAN HELP YOU GET IT

For 71 years Layne has been planning and producing efficient, economical, dependable water supply systems for municipalities throughout the world. This vast experience can be of benefit to you . . . in developing a new supply . . . in extending your present water system . . . in achieving greater production through overhaul of your existing system.

Call Layne for good water at lowest year-after-year cost.

**LAYNE-NEW YORK COMPANY, INC.**

15 Ryder Street • Arlington 74, Mass.

Layne

**Water Wells • Vertical Turbine Pumps**

**WATER TREATMENT**

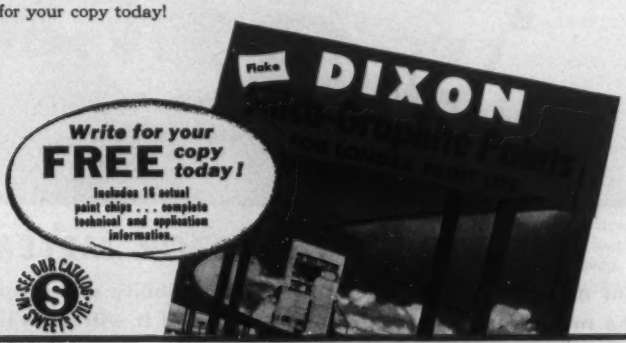
*Affiliated with Layne & Bowler, Inc., Memphis, Tenn.*

# CUT maintenance paint COSTS UP TO 50%

## with Dixon Flake Silica-Graphite Paints!

**This FREE Bulletin shows how! Write for it today!**

Just out! This new Dixon bulletin actually can save you up to half your tank painting costs. It explains, in non-technical language, how the unique overlapping pigment flakes of Dixon Silica-Graphite Paints form a heavier, stronger paint film that resists cracking and chipping and protects longer. Users of Dixon Flake Silica-Graphite Paints report 9 to 10 years between paintings, against an average of 5 years or less for other paints. Get the whole money-saving story from this new Dixon bulletin. It's FREE! Write for your copy today!

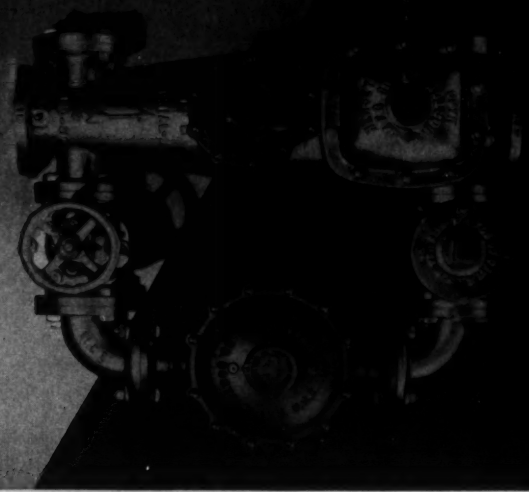

Flake
DIXON
Write for your
FREE copy today!
Includes 16 actual paint chips . . . complete technical and application information.
SEE OUR CATALOG IN SWEET'S FILE

**Paint Products Division**

## JOSEPH DIXON CRUCIBLE COMPANY

**80 Federal St., Boston 10, Massachusetts Tel. LI. 2-9487**

HERSEY



## THE HERSEY DETECTOR METER

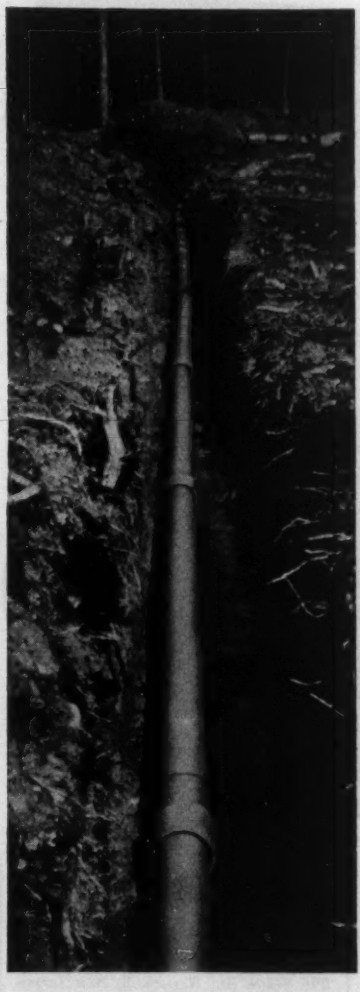
**has never been surpassed in its dependability and accuracy in the measurement of all rates of flow and it will deliver in an emergency the full capacity with a minimum loss of head.**

*This Detector Meter made only by Hersey*

**HERSEY MANUFACTURING COMPANY**

**SOUTH BOSTON, MASS.**

**BRANCH OFFICES: NEW YORK — PORTLAND, ORE. — PHILADELPHIA — ATLANTA DALLAS — CHICAGO — SAN FRANCISCO — LOS ANGELES**



# Century.

## ASBESTOS-CEMENT PIPE installed in Penna. State Park

Hickory Run State Park in White Haven is one of several Pennsylvania Parks in which "Century" pipe has been used to supply water for recreational areas. For generations to come, this line will carry its full capacity, without the need for maintenance.

Long, trouble-free service is to be expected of "Century" pipe. Being non-metallic, this exceptionally strong, durable pipe cannot tuberculate, rust, or corrode. Its bore stays smooth and frictionless, keeping pumping costs low. It is light in weight, easy to lay, low in cost.

Before you decide on the pipe for *any* water-carrying line, for economy's sake you ought to find out all about "Century" pipe. Write for "Mains Without Maintenance"—an informative free booklet of real value to anyone concerned with water main construction.

**KEASBEY & MATTISON** Company • Ambler • Pennsylvania

*Nature made Asbestos... Keasbey & Mattison has made it serve mankind since 1873*

K&M Rest in asbestos

Worthington-Gamon

# WATCH DOG WATER METERS

**SURE TO MEET YOUR SPECIFICATIONS FOR ACCURACY, LOW MAINTENANCE, LONG LIFE**

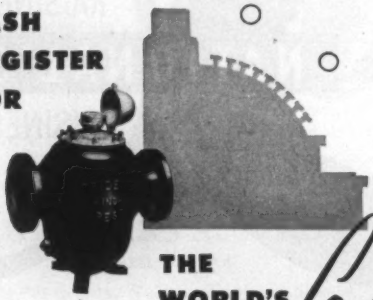
Before you invest in water meters, get acquainted with the design and performance advantages which make Worthington-Gamon Watch Dog Water Meters first choice of so many municipalities and private water companies in the United States.

**WATCH DOG WATER METERS**

"Watch Dog" models . . . made in standard capacities from 30 gpm up; frost-proof and split case in household sizes. Disc type, Turbine type or Compound type. Write for Bulletin.

**WORTHINGTON-GAMON METER DIVISION**
**Worthington Corporation**
**296 South St., Newark 5, New Jersey**

**CASH REGISTER FOR**



**THE WORLD'S *Largest* INDUSTRY**

Over 21-*billion* tons of water are collected, processed, and distributed every year. That's over ten times the combined output of the next four leading industries . . . coal, farm products, oil, and steel.

All these five largest commodities have one thing in common: They come from the ground, and cost good money to collect, process and deliver before they are of much use to man. Like these other commodities, water must be paid for . . . by each user, according to quantity consumed.

Making these payments fair and accurate has been the job of Trident Meters for over 50 years. During this period, Tridents have become famous for their sustained accuracy, reliability, and long service. More Tridents have been installed in the United States than any other meter.

The experience and know-how behind this record is yours for the asking. Simply call or write your nearest Neptune Branch Office.

**NEPTUNE METER COMPANY**
50 West 50th Street, New York 20, N. Y.

**NEPTUNE METERS, LTD.**
1430 Lakeshore Road, Toronto 14, Ontario

*Branch Offices in Principal American and Canadian Cities*

neptune

249

BRANCH OFFICE SERVING NEW ENGLAND • 250 STUART STREET, BOSTON 16, MASS.

Increasing efficiency, carrying capacity and pressure of water mains has been the *only business* of the National Water Main Cleaning Company since 1905.

During that period, we've cleaned over 45,000,000 feet of cast iron water mains and, we have yet to find the main (regardless of age or condition) that National can't restore to at least 95% of its original rated capacity.

The cost of National cleaning is small, compared to the advantages and savings effected in increased volume and reduced pumping costs. Resultant increase in water pressure reduces fire hazard, particularly in outlying districts.

At no obligation to you, our engineers will check the condition of your water mains, and if they need cleaning, estimate the cost of *National cleaning.*

*Write or call us today!*

**NATIONAL WATER MAIN CLEANING COMPANY**
**50 Church Street · New York, N. Y.**

33

ATLANTA, GA., 333 Candler Building • BERKELEY, CALIF., 905 Grayson Street • DECATUR, GA., P. O. Box 385 • BOSTON, MASS., 115 Peterboro Street • CHICAGO, 122 So. Michigan Avenue • ERIE, PA., 439 E. 6th Street • FLANDREAU, S.D., 315 N. Crescent Street • KANSAS CITY, MO., 406 Merchandise Mart and 2201 Grand Avenue • LITTLE FALLS, N.J., Box 91 • LOS ANGELES, 5075 Santa Fe Avenue • MINNEAPOLIS, MINN., 200 Lumber Exchange Building • RICHMOND, VA., 210 E. Franklin Street • SALT LAKE CITY, 149-151 W. Second South Street • SIGNAL MOUNTAIN, TENNESSEE, 204 Slayton Street • MONTREAL, CANADA, 2032 Union Avenue • WINNIPEG, CANADA, 576 Wall Street • HAVANA, CUBA, Lawrence H. Daniels, P. O. Box 531 • SAN JUAN, PUERTO RICO, Luis F. Caratini, Apartado 2184.

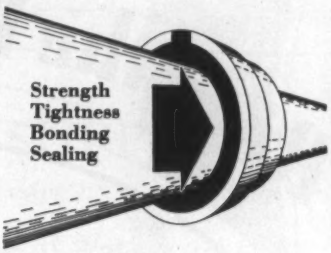
# BOND-O

*Homogenized*

SELF CAULKING COMPOUND

*Every bag of BOND-O is a bag of perfect jointing compound.*

**NORTHROP & CO. INC.**
SPRING VALLEY, NEW YORK




## PUBLIC WORKS SUPPLY CO.

DISTRIBUTORS OF

"DARLING" Fire Hydrants, Valves, Tapping Sleeves.
"DRESSER" Couplings, Sleeves, Clamps.
"FORD" Meter Test Benches, Yokes, Copper Horns.
"J-M" Bacteria free Asbestos Yarning Rope—Style 4210 and 4211.

CAST IRON GATE AND CURB BOXES

93-95 BROOKLINE ST., LYNN, MASS. Tel. LYnn 2-7823

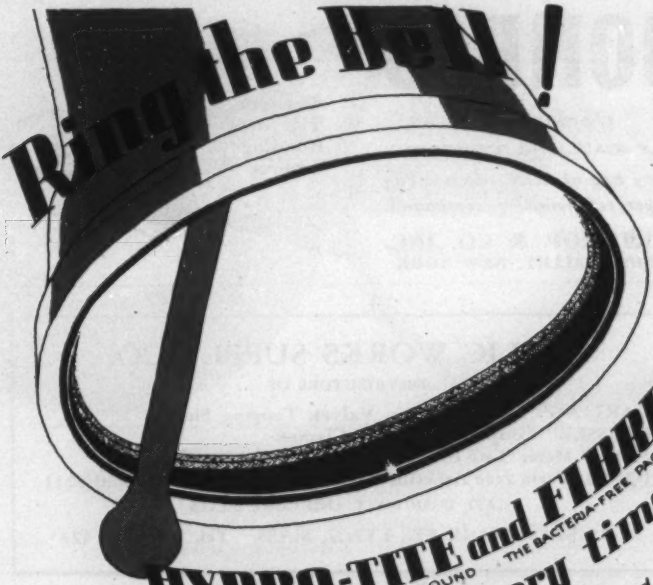
## Cement Lined Service Pipe

WE CAN NOW ship your requirements in all sizes of black or galvanized, steel or wrought iron pipe from stock. Genuine "Lipco" Cement Lined Pipe and Lead Lined Fittings have given and will continue to give years of trouble-free service.

## CEMENT LINED PIPE COMPANY

93-95 Brookline St. Tel. LYnn 2-7823 Lynn, Mass.

Pioneer Manufacturers of CENTRIFUGAL CEMENT LINED PIPES




HYDRO-TITE and FIBREX

THE DEPENDABLE JOINT COMPOUND — THE BACTERIA-FREE PACKING

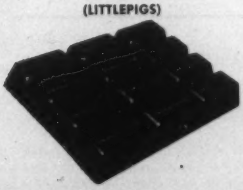
ring the bell every time with a perfect joint—

POWDER OR PIGS — WITH FIBREX MAKE PERFECT JOINTS

*Working Samples on Request.*

HYDRO-TITE (POWDER)

HYDRO-TITE (LITTLEPIGS)



FIBREX (REELS)

HYDRAULIC DEVELOPMENT CORPORATION

Main Sales Office: 50 Church Street, New York — General Offices and Works: 31 Medford Station, Boston, Mass.

Tel. SUDBURY 458 P. O. BOX 153

# HILCO SUPPLY

**delivers**

**A Complete Line of Waterworks Supplies To All New England**

***Quality Products — Fast, Courteous and Dependable Service***

**At the Junction of Routes 20 and 27**
**SOUTH SUDBURY, MASSACHUSETTS**

JOHNSON PLASTIC CORPORATION

Manufacturers of

# JOHNSONITE

PLASTIC FLEXIBLE PIPE

Made from 100% Virgin Polyethylene

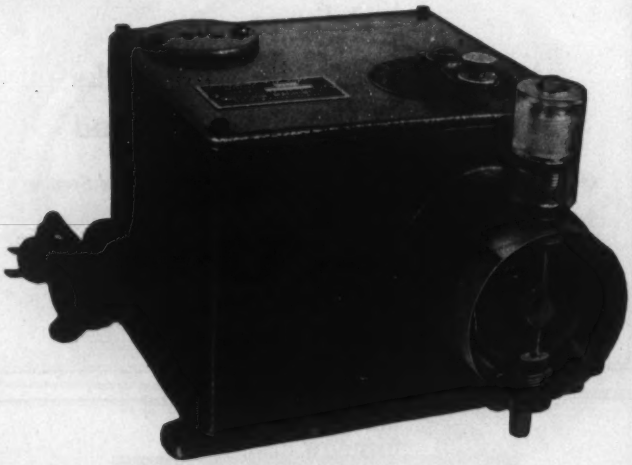
Long Length Coils — Light Weight
No Rust — 1½ Times Less Friction Loss

***DISTRIBUTORS ALL OVER NEW ENGLAND***

For further information write or phone
our New England Representative

JOHN K. KIRN
1 West Shore Drive, Marblehead, Massachusetts
Telephone Neptune 2-1928

# PRECISION
## Chemical Pumps



For Chlorinating Swimming Pools, Drinking Water, Waste.
Fluoridation of Municipal Water Supplies.
Corrosion and Scale Control, Phosphate Injection.
Chemical Waste Treatment.
Automatic Sampling.

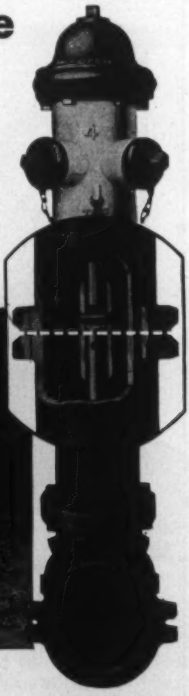
Accurate, dependable, positive displacement, diaphragm type pumps. Constant rate or meter paced for automatically variable output.

## Precision Machine Company

**8 Walnut Street** **Somerville, Massachusetts**

# From Break to Service *in 11 minutes . . .*

• **THE KENNEDY SAFETOP** is the only hydrant with the threaded breaking ring that gives positive connection and rigid alignment of the two standpipe sections. Extensive tests and actual service reports show that the Kennedy *Safetop* can stand as tough a blow as the conventional hydrant without damage. But under a smashing impact, it always breaks cleanly at the breaking ring, without damage to working parts.



**SHEARED OFF** by a heavy road-scraper at 1:26, the Kennedy *Safetop* breaks evenly at the ground level.

*Photos taken at N. Y. State Section meeting, A.W.W.A., April 1949.*

**WITH ONLY** an inexpensive *Safetop* Repair Kit and a few common tools, one man can permanently repair the Kennedy *Safetop*.

**NO NEED FOR DIGGING** because breakage is all above ground . . . no flooding because compression-type valve closes with water pressure.

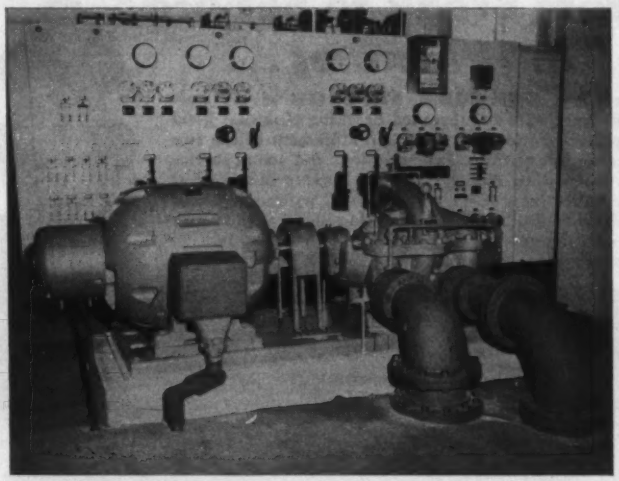
**IN JUST 11 MINUTES** the Kennedy *Safetop* is back in service . . . working as smoothly and efficiently as if nothing had happened.

**WRITE FOR SAFETOP BULLETIN 105**

**THE KENNEDY VALVE MFG. CO. • ELMIRA, N.Y.**

Est. 1877

**VALVES • PIPE FITTINGS • FIRE HYDRANTS**



CITY OF LYNN, MASS. — WALNUT ST. PUMPING STATION

Again the City of Lynn has selected DE LAVAL for their new high service pump. This new unit, rated at 2100 GPM at 1800 RPM against 240' TDH, is powered by a 200 H.P. General Electric Company synchronous motor.

Once more the engineering was handled in its entirety by Morris Knowles, Inc., Pittsburgh, Pennsylvania.

The new unit replaces a De Laval that, through the past years, grew too small to keep up with the City's growth but even now the original pump is ready for more years of efficient, reliable operation in another location.

Why not investigate DE LAVAL'S advantages?

---

**TURBINE EQUIPMENT COMPANY OF NEW ENGLAND**

**80 Federal Street** **Phone LIberty 2-5993** **Boston 10, Mass.**

***New England Representatives for***

**DE LAVAL STEAM TURBINE COMPANY**

**TRENTON, NEW JERSEY**

# NOW...

## A Tapping Machine 1/3 Lighter

**Easier to Operate**

**Easier to Carry**

**New Hays Model "B" Tapping Machine.**

The man in the ditch will welcome this new Hays Model "B" Tapping Machine.

Made of high strength aluminum alloy, it greatly reduces the weight, making it much easier to carry, handle and operate.

Only 36 pounds to handle.

Also new is the renewable bearing bronze feed yoke insert, adding to maintenance economy.

*Send for Folder No. 125-A.*

- An aluminum alloy Tapping Machine which includes all design and operating features of the field proven Hays Model "B" bronze machine. Same working parts.
- Rugged but light weight.
- Fast and simple to operate.
- Requires minimum of working space.
- No disassembly to insert Corporation Stop — half turn of handle positions Stop for insertion in main.
- Complete with chest.

If you need a new or better tapping machine, write or wire for "The Man from Hays" to make an on-the-job demonstration of the new HAYS MODEL B Tapping Machine.

HAYS®

WATER WORKS PRODUCTS

**HAYS MANUFACTURING CO.**

**ERIE, PA.**

# Danger

## Look at the Facts!

***MARCH & APRIL SPELL DANGER***

1. FACTS SHOW THAT — the majority of all pipe breaks occur within the first year after installation.

2. FACTS SHOW THAT — most pipe fractures occur in late winter and early spring . . . due to pipe settlement and ground conditions.

3. FACTS SHOW THAT — it's best to *prepare now* for the *emergency* around the corner. Call H. R. PRESCOTT & SONS, INC. for a complete line of **repair sleeves, couplings** and **saddles.**

**H. R. PRESCOTT & SONS, INC.**

WATER WORKS SUPPLIES FOR NEW ENGLAND

**Box 7, Greendale Branch, Worcester 6, Mass.**

**Tel. West Boylston 5-3863**

# 3 Way dependability in all EDDY

## Fire Hydrants

1. **IN CASE OF FIRE** — dependable, smooth operation . . . clear, large waterways . . . insure plenty of water. Hydrants open fast and easily *with* the pressure . . . and close without water hammer.
2. **IN CASE OF ACCIDENT** — stem held in place below main valve means no water loss due to a bent stem. One man can easily remove all operating mechanism for inspection or repairs.
3. **FREEZE PROOF** — Eddy's positive drip action automatically drains hydrant barrel of all water when hydrant is closed . . . safeguards hydrant against freeze-ups.

• • •

**H. R. Prescott & Sons, Inc.**
NEW ENGLAND SALES AGENTS
Box 7, Greendale Sta.
Worcester 6, Massachusetts
Tel. WEst Boylston 5-3863

• • •

# EDDY VALVE COMPANY
## WATERFORD, NEW YORK

# pedigree is no accident...

Just as a show-dog's winning pedigree is no accident, neither is the pedigree of a Wallace & Tiernan Chlorinator. Both are distinctive and reflect the result of years of selection, training and experience.

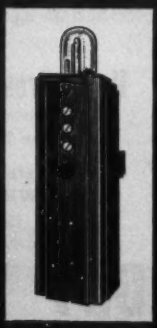
Selection, in the sense of progressive, laboratory-tested improvements in design and construction . . . Improvements which increase the value of dependability "inbred" in W&T Equipment for forty years.

Training, in the sense of a nation-wide staff of Chlorination Specialists, equipped to give prompt service and installation advice on all W&T Equipment.

Experience, in the sense of the many thousands of W&T Chlorinator installations, now meeting the particular daily chlorination requirements of communities all over the world.

The pedigree of a W&T Chlorinator is an open book. Why not write for a free introductory chapter today?

S-83



WALLACE & TIERNAN

NEWARK 1, NEW JERSEY

**JOURNAL OF THE NEW ENGLAND WATER WORKS ASSOCIATION**

***AVAILABLE ON MICROFILM***

THE JOURNAL OF THE NEW ENGLAND WATER WORKS ASSOCIATION is now available to subscribers on microfilm. This method of reproduction permits libraries, and individuals who have limited storage space, to provide legible and durable copies of the JOURNAL in a very small bulk.

Copies of the JOURNAL reproduced in this way are available only at the end of the volume year.

Inquiries concerning purchase should be directed to University Microfilms, 313 N. First Street, Ann Arbor, Michigan.

# Warren Foundry & Pipe Corp.

*SALES OFFICES*
**55 LIBERTY STREET, NEW YORK**
**75 FEDERAL STREET, BOSTON, MASS.**

**Tel. Liberty 2-7979**

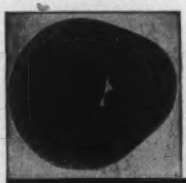
***Manufacturers of***

## CAST IRON PIPE

***Flanged Pipe*** ***Flexible Joint Pipe***
***Bell and Spigot Pipe***
***Special Castings*** ***Short Body B. & S. Specials***
***Warren (WF) Spun Centrifugally Cast Iron Pipe***

**WORKS: PHILLIPSBURG, N. J. and EVERETT, MASS.**

***Large Stock Enables Us to Make Prompt Shipments***



# RAY BAHR

## Get Full Service From Old Mains

The most practical way to meet today's overload demand is to clean clogged water mains. FLEXIBLE Underground Pipe Cleaning Co., specializes in such jobs— any size—2″ to 72″.

41 GREENWAY, HAMDEN, CONNECTICUT

*New England Representative*

# Pipe Founders Sales Corporation

## CAST IRON PIPE AND FITTINGS

FOR

**Water, Steam, Gas and Culverts**

**Special Flanged and Bell and Spigot Castings**

**Lyncast Iron Chemical Castings**

Office: 131 State Street, Boston 9 Warehouse and Yard: East Cambridge, Mass.

# 1879—ROSS— 1879

## AUTOMATIC VALVES

Controls elevation of water in tanks, basins and reservoirs

**ALTITUDE VALVE**

1. Single Acting
2. Double Acting

Maintains desired discharge pressure regardless of change in rate of flow

**REDUCING VALVE**

Regulates pressures in gravity and pump systems; between reservoirs and zones of different pressures, etc.

Maintains levels in tank, reservoir or basin

1. As direct acting

2. Pilot operated and with float traveling between two stops, for upper and lower limit of water elevation.

**FLOAT VALVE**

A self contained unit, with controls three or more automatic

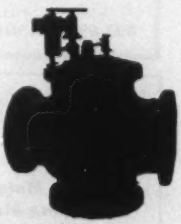
**COMBINATION VALVE**

Combination automatic control both directions through the valve.

Maintains safe operating pressures for conduits, distribution and pump discharge

**SURGE-RELIEF VALVE**

Electric remote control—solenoid or motor can be furnished



**REMOTE CONTROL VALVE**

Adapted for use as primary or secondary control on any of the hydraulically controlled or operated valves.

ROSS VALVE MFG. CO., INC. Box 592 TROY, N. Y.

## Horton Standpipe
### at Biddeford, Me.

The Biddeford and Sacco Water Company installed this 1,250,000-gal. Horton welded steel standpipe in its water distribution system to help provide more uniform pressures in the mains. The tank is 60-ft. in diam. and 51-ft. 4-in. high.

Horton reservoirs are built in sizes up to 10,000,000-gals. We also build ellipsoidal bottom elevated tanks in capacities from 15,000 to 500,000 gal. and radial-cone bottom tanks in sizes from 500,000 to 3,000,000-gals.

We shall be glad to furnish information or quotations on Horton tanks.

## CHICAGO BRIDGE & IRON COMPANY
201 Devonshire Street, Boston 10, Massachusetts
Eastern Plant — Greenville, Pa.

*FLANGED PIPE AND SPECIALS* — *WATER WORKS BRASS GOODS*
*CURB AND GATE BOXES* — *HYDRANTS AND VALVES*
*CRESCENT DIAPHRAGM PUMPS* — *PIPELINE EQUIPMENT AND TOOLS*
*WROUGHT IRON AND STEEL CEMENT LINED PIPE*
*LEAD LINED FITTINGS*

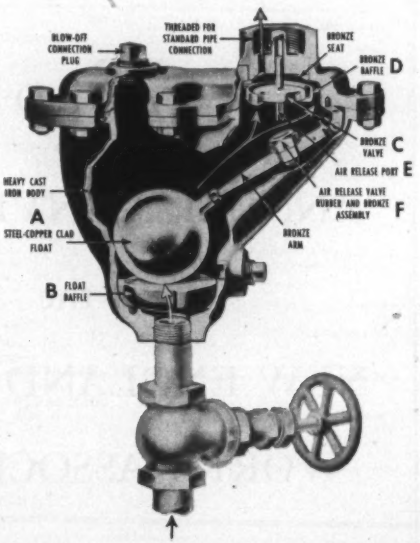
## EUREKA CEMENT LINED PIPE CO., INC.
Telephone: LY-3-9550
591-593 WASHINGTON STREET — LYNN, MASSACHUSETTS

## R. H. WHITE CONSTRUCTION CO., Inc.
*GENERAL CONTRACTORS*

*Water Mains* — *Pumping Stations*
*Pumping Machinery* — *Standpipe Foundations*
*Sewerage Disposal*

**41 CENTRAL ST., AUBURN, MASSACHUSETTS**
(Tel. Auburn 8121)

# Rensselaer Combined *Air* and *Vacuum* AND *Air Release* VALVES




This Rensselaer valve is used to allow air to escape while the pipe is being filled with water; to allow air to flow into the pipe when it is being emptied of water and to allow accumulated air under pressure to escape at high points of the line.

It is used extensively for water mains, turbine pump discharge, bowls of booster pumps, air tanks and sand traps.

This valve will positively close under low water head, cannot blow shut and allows full and clear passage of air.

It is a combination vent, vacuum and pressure air valve, with all parts built for long and satisfactory service.

It is available in simplified form for air release only. Ask for bulletin No. F. 106C

**Rensselaer VALVE CO.** TROY, N. Y.

GATE VALVES • FIRE HYDRANTS • SQUARE BOTTOM VALVES • CHECK VALVES • AIR RELEASE VALVES

SALES REPRESENTATIVES IN PRINCIPAL CITIES

# 73RD

# ANNUAL CONVENTION

of the

# NEW ENGLAND WATER WORKS ASSOCIATION

October 3-6, 1954

Poland Spring House

Poland Spring, Maine

# CLASSIFIED DIRECTORY OF ADVERTISEMENTS


**ASBESTOS-CEMENT PIPE.**
Johns-Manville ..... Following front cover
Keasbey & Mattison Company ..... vii

**BRASS GOODS.**
Eureka Cement Lined Pipe Co. ..... xxiv
Hays Mfg. Co. ..... xvii
Hilco Supply ..... xiii
Mueller Co. ..... Following front cover
Pierce-Perry Co. ..... iii
Smith Mfg. Co., The A. P. ..... Following front cover

**CALKING MACHINERY AND TOOLS.**
Hydraulic Development Corp. ..... xii
Mueller Co. ..... Following front cover
Northrop & Co. ..... xi

**CAST IRON PIPE.** (See Pipe, Cast Iron)

**CEMENT LINED PIPE.** (See Pipe, Cement Lined.)

**CHEMICAL FEED APPARATUS.**
B-I-F Industries ..... Following front cover
% Proportioneers, Inc. % ..... Following front cover
Wallace & Tiernan Co., Inc. ..... xx

**CHLORINATORS.**
B-I-F Industries ..... Following front cover
Precision Machine Co. ..... xiv
% Proportioneers, Inc. % ..... Following front cover
Wallace & Tiernan Co., Inc. ..... xx

**CLEANING WATER MAINS.**
Flexible Underground Pipe Cleaning Co. ..... xxii
National Water Main Cleaning Co. ..... x

**COCKS, CURBS AND CORPORATIONS.**
Eureka Cement Lined Pipe Co. ..... xxiv
Hays Mfg. Co. ..... xvii
Mueller Co. ..... Following front cover
Pierce-Perry Co. ..... iii
Smith Mfg. Co., The A. P. ..... Following front cover

**CONCRETE PIPE.** (See Pipe, Concrete.)

**CONTRACTORS' EQUIPMENT.**
Hydraulic Development Corp. ..... xii
Northrop & Co. ..... xi

**CONTRACTORS.**
Layne-New York Co., Inc. ..... iv
Maher, D. L. Co. ..... iii
Repucci, C. & Sons ..... iii
White Construction Co., R. H. ..... xxiv

**COUPLINGS, FLEXIBLE PIPE**
Johns-Manville ..... Following front cover
Public Works Supply Company ..... xi

**CURB BOXES.**
Eureka Cement Lined Pipe Co. ..... xxiv
Hays Mfg. Co. ..... xvii
Hilco Supply ..... xiii
Mueller Co. ..... Following front cover
Pierce-Perry Co. ..... iii
H. R. Prescott & Sons, Inc. ..... xviii
Public Works Supply Company ..... xi

**DIAPHRAGMS, PUMPS.**
Precision Machine Co. ..... xiv
% Proportioneers, Inc. % ..... Following front cover

**ENGINEERS.**
Camp, Dresser & McKee ..... ii
Coffin & Richardson ..... ii
Crosby, Irving B. ..... ii
Fay, Spofford and Thorndike ..... ii
Haley and Ward ..... ii
Hazen and Sawyer ..... iii
Knowles Morris, Inc. ..... ii
Leggette & Brashears ..... ii
Maguire & Associates, Charles A. ..... iii
Metcalf and Eddy ..... ii
Pirnie Engineers, Malcolm ..... iii
Pitometer Co. ..... iii
Weston and Sampson ..... iii
Whitman and Howard ..... iii

**ENGINES.** (See Pumps and Pumping Engines.)

**EQUIPMENT.** (See Contractors' Equipment.)

## CLASSIFIED DIRECTORY OF ADVERTISEMENTS *(Continued)*


**FEED WATER FILTERS.**
% Proportioneers, Inc. % ..... Following front cover
Ross Valve Mfg. Co., Inc. ..... xxiii

**FILTRATION PLANT EQUIPMENT.**
B-I-F Industries ..... Following front cover
% Proportioneers, Inc. % ..... Following front cover

**FLAP VALVES.**
Eddy Valve Co. ..... xix

**FLEXIBLE JOINTS.**
U. S. Pipe and Foundry Co. ..... xxxii

**FURNACES.**
Hilco Supply ..... xiii
Hydraulic Development Corp. ..... xii
Leadite Co., The ..... Back cover
Mueller Co. ..... Following front cover
Northrop & Co. ..... xi
Pollard Co., Joseph G. ..... Following front cover
H. R. Prescott & Sons, Inc. ..... xviii
Public Works Supply Company ..... xi

**GAS HOLDERS.**
Chicago Bridge and Iron Co. ..... xxiv

**GATE VALVES.** (See Valves.)

**GUNITE CONSTRUCTION**
Gunite-Restoration Co., Inc. ..... ii

**HOSE, SUCTION AND CONDUCTION.**
H. R. Prescott & Sons, Inc. ..... xviii

**HYDRANTS, FIRE.**
Eddy Valve Co. ..... xix
Hilco Supply ..... xiii
Kennedy Valve Mfg. Co. ..... xv
Mueller Co. ..... Following front cover
H. R. Prescott & Sons, Inc. ..... xviii
Public Works Supply Company ..... xi
Rensselaer Valve Co. ..... xxv
Smith Mfg. Co., The A. P. ..... Following front cover
Wood, R. D., Co. ..... Following front cover

**HYDRANTS, PUMPS.**
Hilco Supply ..... xiii
H. R. Prescott & Sons, Inc. ..... xviii

**LEAD PIPE.** (See Pipe, Lead.)

**METERS, OIL AND WATER.**
Badger Meter Mfg. Co. ..... Following front cover
B-I-F Industries ..... Following front cover
Hersey Mfg. Co. ..... vi
Neptune Meter Co. ..... ix
Pipe Founders Sales Corp. ..... xxii
Pittsburgh Equitable Meter Divn. ..... Following front cove
Worthington-Gamon Meter Divn. ..... viii

**METER COUPLINGS.**
Badger Meter Mfg. Co. ..... Following front cover
Ford Meter Co. ..... Following front cover
Hays Mfg. Co. ..... xvii
Hersey Mfg. Co. ..... vi
Mueller Co. ..... Following front cover
Neptune Meter Co. ..... ix
Public Works Supply Company ..... xi
Smith Mfg. Co., The A. P. ..... Following front cover
Worthington-Gamon Meter Divn. ..... viii

**METERS (Venturi Type.)**
B-I-F Industries ..... Following front cover

**METER BOXES.**
Ford Meter Co. ..... Following front cover
Mueller Co. ..... Following front cover
Public Works Supply Company ..... xi

**METER TESTERS.**
Badger Meter Mfg. Co. ..... Following front cover
Ford Meter Co. ..... Following front cover
Mueller Co. ..... Following front cover
Neptune Meter Co. ..... ix
Public Works Supply Company ..... xi

**OIL ENGINES.**
Fairbanks, Morse & Co. ..... Following front cover

**PAINTS.**
Jos. Dixon Crucible Co. ..... v

## CLASSIFIED DIRECTORY OF ADVERTISEMENTS *(Continued)*


**PIPE, ASBESTOS-CEMENT.**
Johns-Manville ..... Following front cover
Keasbey & Mattison Company ..... vii

**PIPE, BRASS.**
Hilco Supply ..... xiii
Pierce-Perry Co. ..... iii
H. R. Prescott & Sons, Inc. ..... xviii

**PIPE, CAST IRON (and Fittings)**
B-I-F Industries ..... Following front cover
Cast Iron Pipe Research Association ..... xxxi
Hilco Supply ..... xiii
Pipe Founders Sales Corp. ..... xxii
H. R. Prescott & Sons, Inc. ..... xviii
U. S. Cast Iron Pipe and Foundry Co. ..... xxxii
Warren Foundry and Pipe Co. ..... xxi
Wood, R. D., Co. ..... Following front cover

**PIPE, CEMENT LINED.**
Cast Iron Pipe Research Association ..... xxxi
Cement Lined Pipe Co. ..... xi
Eureka Cement Lined Pipe Co. ..... xxiv
Pipe Founders Sales Corp. ..... xxii
U. S. Cast Iron Pipe and Foundry Co. ..... xxxii

**PIPE, COATING AND LININGS.**
Centriline Corp. ..... Following front cover
Koppers Company, Inc. ..... Following front cover

**PIPE, CONCRETE.**
Lock Joint Pipe Co. ..... Facing front cover

**PIPE CUTTING MACHINES.**
Pollard Co., Joseph G. ..... Following front cover
Smith Mfg. Co., The A. P. ..... Following front cover

**PIPE JOINTING MATERIAL.**
Hilco Supply ..... xiii
Hydraulic Development Corp. ..... xii
Leadite Co., The ..... Back cover
Northrop & Co. ..... xi

**PIPE, LEAD.**
Pierce-Perry Co. ..... iii

**PIPE LINING.**
Cement Lined Pipe Co. ..... xviii
Centriline Corp. ..... Following front cover

**PIPE, PLASTIC**
Johnson Plastic Corp. ..... xiii

**PIPE, PRESTRESSED CONCRETE.**
Lock Joint Pipe Co. ..... Facing front cover

**PIPE, WROUGHT IRON AND STEEL.**
Pierce-Perry Co. ..... iii

**PLUG VALVES.**
Eddy Valve Co. ..... xix
Hays Mfg. Co. ..... xvii
Mueller Co. ..... Following front cover
Pittsburgh Equitable Meter Divn. ..... Following front cover

**PITOMETERS.**
Pitometer Co., Engrs. ..... iii

**PORTABLE AIR COMPRESSORS.** (See Air Compressors.)

**PRESSURE REGULATORS.**
Hilco Supply ..... xiii
Mueller Co. ..... Following front cover
Pittsburgh Equitable Meter Divn. ..... Following front cover
Precision Machine Co. ..... xiv
H. R. Prescott & Sons, Inc. ..... xviii
Ross Valve Mfg. Co., Inc. ..... xxiii

**PROVERS, WATER.**
Badger Meter Mfg. Co. ..... Following front cover

**PUMPS AND PUMPING MACHINES.**
Fairbanks, Morse & Co. ..... Following front cover
Layne-New York Co., Inc. ..... iv
Hilco Supply ..... xiii
Maher Co., D. L. ..... iii
Precision Machine Co. ..... xiv
H. R. Prescott & Sons, Inc. ..... xviii
Ross Valve Mfg. Co., Inc. ..... xxiii
Turbine Equipment Co. ..... xvi
White Construction Co., R. H. ..... xxiv

## CLASSIFIED DIRECTORY OF ADVERTISEMENTS *(Continued)*


**RATE CONTROLLERS AND GAUGES.**
Badger Meter Mfg. Co. ..... Following front cover
B-I-F Industries ..... Following front cover

**SHEAR GATES.**
Eddy Valve Co. ..... xix
Mueller Co. ..... Following front cover

**SLEEVES AND VALVE TAPPINGS.**
Eddy Valve Co. ..... xix
Hilco Supply ..... xiii
Mueller Co. ..... Following front cover
H. R. Prescott & Sons, Inc. ..... xviii
Public Works Supply Company ..... xi
Rensselaer Valve Co. ..... xxv
Smith Mfg. Co., The A. P. ..... Following front cover

**STAND PIPES.**
Chicago Bridge and Iron Co. ..... xxiv

**STEEL PLATE WORK.**
Chicago Bridge and Iron Co. ..... xxiv
Pittsburgh-Des Moines Steel Co. ..... Following front cover

**SUPPLIES AND TOOLS.**
Hilco Supply ..... xiii
Hydraulic Development Corp. ..... xii
Leadite Co., The ..... Back cover
Mueller Co. ..... Following front cover
Northrop & Co. ..... xi
Pierce-Perry Co. ..... iii
Pollard Co., Joseph G. ..... Following front cover
H. R. Prescott & Sons, Inc. ..... xviii
Public Works Supply Company ..... xi

**TAPPING MACHINES.**
Hays Mfg. Co. ..... xvii
Mueller Co. ..... Following front cover
Smith Mfg. Co., The A. P. ..... Following front cover

**TANKS, STEEL.**
Chicago Bridge and Iron Co. ..... xxii
Pittsburgh-Des Moines Steel Co. ..... Following front cover

**TAPPING SLEEVES.** (see Sleeves and Valves, Tappings.)

**VALVE BOXES.**
Eddy Valve Co. ..... xix
Hilco Supply ..... xiii
Kennedy Valve Mfg. Co. ..... xv
Mueller Co. ..... Following front cover
Pierce-Perry Co. ..... iii
Pipe Founders Sales Corp. ..... xxii
H. R. Prescott & Sons, Inc. ..... xviii
Public Works Supply Company ..... xi
Smith Mfg. Co., The A. P. ..... Following front cover
Wood, R. D., Co. ..... Following front cover

**VALVE INSERTING MACHINES.**
Mueller Co. ..... Following front cover
Smith Mfg. Co., The A. P. ..... Following front cover

**VALVES, CHLORINE.**
Wallace & Tiernan Co., Inc. ..... xx

**VALVES, GATE.**
Eddy Valve Co. ..... xix
Hilco Supply ..... xiii
Kennedy Valve Mfg. Co. ..... xv
Mueller Co. ..... Following front cover
Pierce-Perry Co. ..... iii
H. R. Prescott & Sons, Inc. ..... xviii
Public Works Supply Company ..... xi
Rensselaer Valve Co. ..... xxv
Smith Mfg. Co., The A. P. ..... Following front cover
Wood, R. D., Co. ..... Following front cover

**VALVES, REGULATING.**
Mueller Co. ..... Following front cover
Ross Valve Mfg. Co., Inc. ..... xxiii

**WATER-PROOFING.**
Gunite Restoration Co., Inc. ..... ii

**WATER WASTE DETECTION.**
Pitometer Co., The ..... iii

**WELLS, GRAVEL, FILTER AND DRIVEN.**
Layne-New York Co. ..... iv
Maher Co., D. L. ..... iii

**WROUGHT IRON PIPE.** (See Pipe, Wrought Iron and Steel.)

# 96%

## ARE

## STILL IN SERVICE

**We are stating a fact and you don't have to take our word for it. We refer you to one of the most important fact-finding jobs ever undertaken by the water works industry — the recently completed survey of the service life of water works facilities. This survey was sponsored by three water works associations.**

**The survey shows that 96% of all the cast iron water mains ever laid by 25 representative cities in sizes 6-inch and larger *are still in service.***

**A detailed report of the survey has recently been published by the American Water Works Association. We have reprinted, by permission, the facts pertaining to cast iron water mains in a brochure which will be sent on request. Write to Cast Iron Research Association, Thomas F. Wolfe, Managing Director, 122 South Michigan Ave., Chicago 3, Ill.**

CAST IRON

**CAST IRON PIPE SERVES FOR CENTURIES**

*Lithographed on stone for U. S. Pipe and Foundry Co. by John A. Noble, A. N. A.*

THIS ILLUSTRATION shows the laying of cast iron pipe in the business section of a small town, which could be for water, gas or sewerage service. Such a situation calls for a pipe with proved long life to be placed beneath the costly permanent pavement. Whether in the business district, residential area or the country, cast iron pipe has established an enviable record of low cost per service year.

We are in an excellent position to furnish your requirements for cast iron pipe, either centrifugally cast in sizes 2- to 24-inch or pit cast for larger sizes—all of which are produced under rigid quality controls and in accordance with standard specifications.

**U.S.**
**cast iron**
**PIPE**
FOR WATER, GAS, SEWERAGE AND INDUSTRIAL SERVICE

# The Journal of the
# New England Water Works Association

is a quarterly publication, containing the papers read at the meetings, together with reports of the discussions. Many of the contributions are from writers of the highest standing in their profession. It affords a convenient medium for the interchange of information and experience between the members, who are so widely separated as to find frequent meetings an impossibility. Its success has more than met the expectation of its projectors; there is a large and increasing demand for its issues, and every addition to its subscription list is a material aid in extending its field of usefulness.

All members of the Association receive the JOURNAL for three dollars per annum which sum is included in their annual dues; to all others the subscription is four dollars per annum.

## TO ADVERTISERS

THE attention of parties dealing in goods used by Water Department is called to the JOURNAL OF THE NEW ENGLAND WATER WORKS ASSOCIATION as an advertising medium.

Its subscribers include the principal WATER WORKS ENGINEERS AND CONTRACTORS in the United States. The paid circulation is 1,200 COPIES.

Being filled with original matter of the greatest interest to Water Works officials it is PRESERVED and constantly REFERRED TO BY THEM, and advertisers are thus more certain to REACH BUYERS than by any other means.

The JOURNAL is not published as a means of revenue, advertising being inserted solely to help meet the large expense of publication.

### ADVERTISING RATES

| | One Issue | Four Issues |
|---|---|---|
| One Page | $ 48.00 | $120.00 |
| Half Page | 30.00 | 75.00 |
| Quarter Page | 18.00 | 45.00 |
| Eighth Page | 11.00 | 27.00 |
| One Page, 2 Colors | 68.00 | 272.00 |
| Back Cover | 100.00 | 250.00 |
| Cards, 1/10 Page | 8.00 | 20.00 |

Size of page 4½ x 7½ net.

A sample copy will be sent on application.

For further information address the Advertising Agent

MRS. ALICE R. MELROSE,
73 TREMONT STREET,
BOSTON 8, MASSACHUSETTS

# LEADITE

**COSTS ARE REDUCED WHEN *LEADITE* IS USED**

Of course, the greatest advantage in using LEADITE, is, that it makes a good, tight joint,—and thus reduces leakage to a minimum,—but LEADITE also offers the following advantages, which are worthy of serious consideration: Saves caulking expenses—Reduces cost of digging large bell-holes —Saves in cost of material—Reduces time required for pumping "wet trenches"—Saves time in preparation—Saves time in handling on the job—Saves in freight and hauling charges.

Another point, LEADITE saves "interest charges" by speeding up the completion of the water line.

The true value of LEADITE is best indicated by the fact that it has been used on THOUSANDS OF MILES of Water Mains,—all over this Country, as well as in many Overseas Countries.

The Pioneer self-caulking material for c. i. pipe,
Tested and used for over 40 years,
Saves at least 75%.

## THE LEADITE COMPANY

Girard Trust Company Building — Philadelphia, Penna.